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ABSTRACT

The condition of education in Connecticut, especially pertaining to reform efforts initiated from July 1, 1986, to June 30, 1988, is summarized in this biennial report. The document includes indepth discussions of the state's people and economy, teacher and administrator characteristics, student achievements, programs, and school finance. Text, tables, and graphs describe the 2-year period and identify trends within that period and in relation to preceding years. Thus, the report provides both a historical context and a basis for planning. The final section lists indicators of success that were developed to measure progress toward achievement of the state board's educational goals. A special update chapter for the year following implementation (1989) describes the results of the State Board of Education's equal opportunity efforts and the Educational Cost Sharing Grant and changes in three critical areas: the professionalization of teaching; the movement toward quality, integrated education; and school finance. (LMI)

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Condition of Education
In Connecticut

Elementary and Secondary

Meeting *The Challenge*

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Condition of Education
in Connecticut

Elementary and Secondary

Meeting *The Challenge*

1988/89

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Foreword

In recent years, the State of Connecticut has researched, developed, established by legislation, set in place and — most importantly — set in motion significant approaches to education reform. The Education Enhancement Act has brought Connecticut teacher salaries to second in the nation, established a comprehensive induction process that provides support for and assessment of new teachers, and instituted the requirement that experienced teachers participate in professional development activities in order to retain their professional certification. The support and leadership of Governor William A. O'Neill and the General Assembly have made these important reforms possible.

Clearly, the period documented in this edition of *Meeting the Challenge* (July 1, 1986, through June 30, 1988) was a pivotal time in the history of education in Connecticut. This report details the condition of education during this time and provides additional perspective on previous years. Thus, it describes the realities that made education reform essential. However, the report also highlights the positive effects of the first stages of reform; it documents recent progress and reinforces the importance of the direction we have chosen for the future.

Some of the positive results of education reform have already begun to take shape. We have therefore chosen to add to this report a special chapter — "Update: Fall 1989" — that highlights some of the significant progress made since the formal closing date of this report. This chapter, which begins on page v, also describes the important results of the State Board of Education's efforts to provide opportunities for quality and integrated education to all Connecticut students. Also discussed is the Education Cost Sharing Grant, a comprehensive equalization grant developed by the State Board of Education, recommended by the Governor and established by the General Assembly in June 1988 as a major restructuring of school finance. A four-year transition to this grant begins in 1989-90.

Without question, the coming years will be important ones for education in Connecticut. While presenting a detailed picture of what has been happening in our schools in recent years, this edition of *Meeting the Challenge* will also provide a reference point against which future achievements can be measured.

Central to our efforts to evaluate results are the indicators of success, which were developed to provide clear and accurate measures of our progress in achieving the objectives that support the State Board of Education's seven goals. This report represents our third opportunity to systematically review the indicators, which provide information for evaluating the condition of education and making decisions for its future (see Chapter 6). Tables, charts and graphs relating to the indicators are identified in these pages by this small symbol: . In coming years, the indicators of success will continue to provide the focus for reporting on the condition of education in Connecticut.

We anticipate the future with the expectation that the state's dramatic commitment to education reform will have the desired effect of improving learning for all Connecticut students. However, education reform — like education itself — is not something to be completed and put on a shelf. It is a demanding and exciting process that requires constant evaluation and a willingness to set, and pursue, new goals. We are strongly committed to making this process work for the benefit of all Connecticut citizens.

Gerald N. Tirozzi
Commissioner of Education

Meeting the Challenge — 1988

Update: Fall 1989

Meeting the Challenge: Condition of Education in Connecticut *is published every two years. It is designed to provide detailed information and analyses concerning education in Connecticut and the context within which teaching and learning take place. The document includes in-depth discussions of the state's people and economy, teacher and administrator characteristics, student achievements, programs and school finance. Text, tables and graphs describe a two-year period (July 1, 1986, through June 30, 1988) and identify trends within that period and in relation to preceding years. Thus, the report provides both a historical context and a basis for planning.*

The year following the closing date of this report (June 30, 1988) saw significant activity and changes in three critical areas: the professionalization of teaching; the movement toward quality, integrated education; and school finance. The intensity and the importance of these efforts make it essential that the discussion of these areas be updated through the beginning of school year 1989-90. This chapter provides that update; the balance of the report, which begins on page 1, maintains its focus on the two-year period from 1986 through 1988.

Quality education for all youngsters is within our reach. The challenge is to remain steadfast in our commitment to developing and implementing effective, comprehensive strategies for promoting equity and excellence. The State Board of Education's vision and the leadership of Governor William A. O'Neill and the General Assembly have resulted in great improvements in recent years that will benefit public education for many years to come. Of immense importance has been the willingness of the Governor and the legislature to provide the dollars necessary to realize educational advances.

Since teachers are the center of the educational universe, a primary goal of the State Board of Education has been to ensure that only the best educators are teaching the state's children. Connecticut's commitment to the reform of the teaching profession has been unparalleled, and our programs are serving as models to other states. Connecticut educators face tougher standards than ever before and are being afforded unprecedented professional status as a number of state initiatives are fully implemented. On July 1, 1989, for example, new certification standards for all teachers became effective. Thus, new initiatives are affecting virtually every educator in the state as of the 1989-90 school year.

The State Department of Education's certification system was redesigned to acknowledge the professional development stages of a teacher's career. The two-tier system of a provisional and a standard teaching certificate was replaced by a three-tier system with initial, provisional and professional educator certificates. Additionally, it is important to note that over the past several years testing requirements were incorporated into the certification process.

New, more rigorous standards for teachers include the following:

- ACADEMIC MAJOR. Beginning in fall 1989, college students planning a career in education and scheduled to graduate in 1993 or later must major in the specific subject area they plan to teach. Elementary teachers are required to concentrate in a specially designed interdisciplinary major. The Cooperating Teacher Program supports and evaluates college students during their clinical experience as student teachers.

- INITIAL EDUCATOR CERTIFICATE. This is granted to qualified individuals who have met the CONNCEPT and CONNTENT testing requirements. The Connecticut Competency Examination for Prospective Teachers (CONNCEPT) ensures that prospective teachers have essential skills in reading, writing and mathematics. The CONNTENT examination, which ensures that prospective teachers have the content knowledge critical to their subject specialization, is being phased in for 23 subject areas. The initial educator certificate is valid for one year, and may be renewed once under certain circumstances, as beginning teachers participate in a formal induction program called BEST.

- BEGINNING EDUCATOR SUPPORT AND TRAINING PROGRAM (BEST). Effective July 1, 1989, each new teacher who is issued an initial educator certificate will be assigned a mentor teacher and will be evaluated on his or her classroom performance. Mentors are specially trained, experienced teachers who serve as resources and role models while assisting new teachers to improve their skills in the areas of planning, classroom management, instruction and assessment of student progress. Six trained assessors (including two teachers, two administrators and two state assessors) will conduct independent classroom observations of each beginning teacher using the Connecticut Competency Instrument, which identifies ten areas of teacher effectiveness. Assessors receive intensive training and must achieve proficiency before evaluating new teachers. A beginning teacher who does not meet the standards of BEST during the first year of teaching may be eligible for a second year in the program.

- PROVISIONAL EDUCATOR CERTIFICATE. This is granted to individuals who have successfully completed BEST. It is valid for eight years while teachers complete graduate work.

- PROFESSIONAL EDUCATOR CERTIFICATE. This is granted to individuals upon the completion of 30 hours of additional college-level study in accordance with the requirements of the specific endorsement area, plus three years of successful teaching under the provisional educator certificate. Effective July 1, 1989, in order to maintain this certificate, educators must complete nine continuing education units every five years, a total of 90 hours of professional development. During the summer of 1989, Department staff converted the certificates of all standard or permanent certificate holders to professional educator certificates. This entailed the conversion of approximately 37,000 certificates.

The innovative program, BEST, mentioned above, challenges the status quo regarding entry into the teaching profession by supporting and assessing the teaching effectiveness of beginning teachers. During three years of extensive development, field testing and refinement, nearly 6,000 educators have been trained to implement the program.

Another state initiative that recognizes the professional status of educators is the Permanent Advisory Council on the Teaching Profession, which began work in September 1989. The State Board of Education established the Council as a significant next step in supporting teacher participation in setting policy related to the effectiveness of teachers and teaching. The Council provides the State Board of Education with advice in the broad areas of teacher preparation, certification and professional development.

Salary is an important indicator of the professionalization of teaching, and the initiative to improve salaries has been a clear success. Connecticut educators are now paid a salary that is competitive with other occupations requiring similar education and training.

Since the Education Enhancement Act, the centerpiece of Connecticut's teaching reform, was passed in 1986, average teacher salaries have increased as much as 50 percent and beginning teacher salaries as much as 75 percent. Under the act, Connecticut's average teacher salary rose from 13th highest in the nation to 2nd highest in 1988-89.

The average salary for all public school teachers in 1989-90 is projected to be about $41,600; the comparable 1986 figure, before enhancement, was $29,437. The average salary of beginning teachers in the 1989-90 school year will be $23,783; the 1986 pre-enhancement average was $17,096. Beginning teachers in 37 of the 166 local school districts will earn $25,000 or more.

A primary objective of the State Board of Education's program to improve teacher salaries was to bring about a more equitable distribution of teachers and teaching talent among school districts. Consequently, from 1986 through 1989, the state provided $360 million to local school districts on an equalized basis to enable poorer school districts to compete with wealthier districts to recruit and retain high-quality teachers.

The state already is getting a return for the dollars in the salary enhancement program. All indications are that greater numbers of highly competent young people are considering and pursuing careers in education — evidence that our investment is paying dividends. When the standards for a profession are raised, more qualified individuals are likely to want to enter the profession. Department analyses show positive trends in the pass rate on the state's essential skills examination and in the number of individuals whose SAT scores are high enough to qualify them for exemption from this test (CONNCEPT). Two examples are:

- The CONNCEPT pass rate has steadily improved over the first four years, with a substantial improvement in the third year in particular, compared with the first two years. The percent of test takers who met the CONNCEPT requirement on the first attempt has advanced from 62.9 percent in 1985-86 to 82.4 percent in 1988-89.

- The number of CONNCEPT waivers granted increased over the first four years, with approximately 18.1 percent of all candidates receiving waivers in the first two years, compared with 40.1 percent in the third year of the program and 42.7 percent in the fourth year of the program (1988-89).

Connecticut also is making significant strides is expanding opportunities for quality and integrated education, a need articulated in *A Report on Racial/Ethnic Equity and Desegregation in Connecticut Public Schools*, presented by the Department to the State Board of Education in January 1988. The report documented growing racial and ethnic isolation in Connecticut and asserted the fundamental principle that integrated education is an essential component of quality education. Four broad recommendations emphasized voluntary approaches to integrating Connecticut schools.

At the direction of the State Board of Education, the Department conducted a year of intensive follow-up study that included meeting with thousands of Connecticut citizens to solicit their suggestions for voluntary ways to reduce racial and economic isolation in the state. This activity culminated in the April 1989 report *Quality and Integrated Education: Options for Connecticut*. The report recommended that several planned or existing activities be refocused to further quality and integrated education, advanced new initiatives (magnet schools, interdistrict collaboration in building and renovating schools for joint use, recruitment of more minority teachers and paraprofessionals) and challenged the business community to provide financial support to expand quality and integrated educational opportunities. In September 1989, Governor O'Neill established a Blue Ribbon Commission of Distinguished Citizens to develop recommendations to expand opportunities for quality and integrated education. The composition and resources of this commission are similar to those of the group that spearheaded teaching reform. Members include school administrators, teachers, students, parents, business and labor leaders, local officials, state legislators, and representatives of higher education and the legal profession.

In 1987, administration of the Department's Interdistrict Cooperative Grant Program was modified to put a greater emphasis on quality and integrated education. In 1988-89, more than 60 districts were involved in interdistrict activity through this grant; in 1989-90, due to an increase in funding from approximately $300,000 to more than $1 million, close to 100 districts will be involved in planning or implementing programs. Some examples:

- Educational Quality through Understanding and Learning (E.Q.U.A.L.) This project brings together youngsters in Grades 5 through 8 from more than 20 communities. It offers three programs: environment and technology, leadership, and cultural roots. The program is rich in instructional variation with many scheduled field trips.

- Bridgeport, Trumbull and Monroe students attend science, mathematics and humanities enrichment sessions. These will include hands-on marine biology experiments on Long Island Sound, nature hikes to expand ecological understanding, and planetarium visits.

- A Regional Center for the Arts will draw students interested in dance to Bridgeport to experience ballet, modern dance and jazz. It is hoped that offerings may eventually include music and drama.

- Teachers from Fairfield County participate in prejudice reduction curriculum training. They will become a cadre of trainers available on an interdistrict basis, with urban trainers traveling to suburbs and vice versa.

Although a few school districts have long made efforts at multicultural education, these efforts primarily have been passive in nature, with students expected to absorb the significance and nuances of cultural diversity from books. What sets the interdistrict programs apart is their direct participation: Students benefit from real multiracial and multicultural experiences, and they have real chances to overcome racial and ethnic myths and stereotypes by gaining new insights.

Connecticut's first state-funded interdistrict programs are incremental steps toward the larger goal of excellence and equity. Other steps are being taken as well. Teaching Opportunities for Paraprofessionals is a significant approach that was funded by the General Assembly in 1989 and will be initiated in 1990. This training program recognizes teacher aides as a significant pool of prospective minority teachers. The Department's initial plan is to recruit and prepare 60 teachers.

The 1989 session of the General Assembly also authorized funding to build or renovate schools to house permanent magnet programs offering quality and integrated education in three regions of the state. Hartford will renovate a school to serve as an early childhood education magnet center for children from Hartford and West Hartford. New Haven will build a regional health and business magnet high school, while Bridgeport, with the support of six suburban districts, will construct a waterfront Regional Vocational Agriculture/Aquaculture Center.

A key factor in efforts to provide equity and excellence for all students is the equitable and effective distribution of resources. The Education Cost Sharing Grant, established by law in 1988, is a new, comprehensive equalization grant that seeks to achieve this goal. This restructuring of school finance combines the funds previously made available through the Guaranteed Tax Base formula and the Education Enhancement Act, and adds annually to this base. In 1989-90, the first of a four-year transition to the Education Cost Sharing Grant, $827 million will be distributed to Connecticut cities and towns. It is important to note that ECS uses Connecticut Mastery Test data as a determinant of need in the finance formula, apparently making Connecticut the first state to adopt such an approach.

These key endeavors — the professionalization of teaching, the expansion of opportunities for quality and integrated education, and the equitable distribution of resources — will continue to be areas of intense focus for the State Board and State Department of Education. In coming years, the progress of these efforts will be measured in many ways and in many contexts. The results will be critical elements in future reports on the condition of education — and, most importantly, in the lives of our children.

Connecticut: Its People and Its Schools

As we approach the 21st century, Connecticut's educational challenge is to make more significant progress toward achieving equity and excellence in the delivery of educational services to the state's diverse populations. Many new and continuing initiatives of the State Department of Education have enhanced the capability of educators to meet this challenge. There are areas, however, which continue to present further challenges and opportunities.

Education does not, however, occur in a vacuum. In order to understand the context within which education takes place, profiles of the state's population, its economy, its schools and its students are presented in this section. The various educational programs administered by the state and local public school districts are highlighted in subsequent chapters.

Connecticut's People

Geographically, Connecticut is the third smallest state in the nation. However, with the fourth greatest population density among the 50 states — 651 residents per square mile — Connecticut ranks 27th in total population with 3,219,000 inhabitants.

Several major demographic trends begun in recent decades have increasingly strong effects on the diversity of Connecticut's school-age population. Total population is a function of both birthrates and migration.

Connecticut's Population Growth

Year	Total Population (thousands)	Average Annual Growth Rate
1950	2,007	1.7
1960	2,535	2.6
1970	3,032	2.0
1980	3,108	0.3
1985	3,170	0.4
1986	3,189	0.6
1987	3,219	0.9
1990 (P)	3,258	0.4
1995 (P)	3,324	0.4
2000 (P)	3,380	0.3

(P) = Projected

Source: Connecticut Office of Policy and Management

The state's low overall birthrate will provide slow, steady population growth of about 0.4 percent annually through the end of the century. Connecticut's birthrate has consistently been below the national average and, as the nation entered the "baby bust" era of the 1980s, Connecticut's birthrate declined even faster than that of the nation. The number of births rebounded during the "baby boomlet" beginning in the mid 1980s, as the last wave of the baby boom population, which had delayed child-rearing for a variety of reasons, started families. Births are expected to peak in the early 1990s before declining gradually through the remainder of the decade.

Also, after years of having more people move out of than into Connecticut, this trend is expected to reverse. The state's robust economy, which is expected to continue to grow (although perhaps less dramatically than in recent years), will provide incentive for people to move to and stay in Connecticut. However, the high relative cost of housing in the state will hinder a major influx of new residents.

As in the 1970s, population growth is expected to reflect industrial development geographically, with growth continuing to be concentrated in the suburbs of major cities and in the upper Fairfield county and lower midstate areas surrounding Danbury and Middletown.

Population projections by age show the dramatic increase in the number of Connecticut residents 65 years of age and older and general declines in the numbers of school-age children.

Population in Connecticut 1980-2000

Age Group	1980	1990 (P)	2000 (P)
0-4	185,188	200,032	183,037
5-9	205,758	192,340	200,963
10-19	544,666	396,107	402,141
20-24	272,382	258,527	191,503
25-64	1,534,718	1,739,626	1,886,335
65+	364,864	471,596	516,002
Total	3,107,576	3,258,228	3,379,981

(P) = Projected

Source: Connecticut Office of Policy and Management

As a result of the low overall birthrate and differential birthrates among the state's minority and white populations, minorities (particularly Hispanics) will continue to be the fastest-growing segments of the population. In a 1983 study by the University of Bridgeport, it was estimated that in 1960 there were 15,000 Hispanics in Connecticut. By 1980, when data were first collected on Hispanics in the federal census, the number rose to 124,499.

Changes in family structure which were dramatically reflected in the 1980 census have continued through the decade. In 1955, 60 percent of the households in the country consisted of a working father, a housewife mother and two or more school-age children. By 1980, only 11 percent of the households consisted of this structure, and by 1985 only 7 percent. Continued declines are expected in the number of children per family, while increases are expected in the number of women working full-time outside the home and in the number of the state's children who will be raised by a single parent.

These trends have an impact on the number and diversity of students entering school and the types of support services they need. While Connecticut's school-age population (ages 5-17) declined 13.9 percent from 1980 to 1986, the youngest age group (under age 5) increased 13 percent during the same period.

Blacks are making up an increasing percentage of the school-age population, and their proportion is expected to rise further. Like whites, the number of black children is declining, but not declining as rapidly as the number of white children. Unlike whites and blacks, the number of Hispanic children is increasing, with the largest growth in the preschool-age population. Currently, minorities represent one in four of Connecticut's kindergarten enrollment.

Numerous studies of young children with special educational needs demonstrate that the sooner we make an investment in programs for these children, the greater the long-term return on that investment will be. The six regional educational service centers and three school districts are currently providing special education services to approximately 500 infants and toddlers (birth to 3 years old) and their families. In addition, through an interagency initiative which began operation in 1987-88, more than 60 families with developmentally delayed infants and toddlers are being provided comprehensive, multidisciplinary services. Experience with this project is assisting in forming state-level policy development for serving this population.

In addition to locating and assessing children from birth to age 3 who are developmentally delayed, local school districts are charged with the responsibility of locating, identifying and providing services to preschool children, ages 3-5, who have special educational needs. Special education, speech and language, physical therapy, psychological and other services are available. Approximately 4,800 children with disabilities, ages 3-5, were served in 1987-88.

A 1985 report presented to the State Board of Education by the Committee on Four Year Olds, Their Families, and the Public Schools indicated that in 1984 almost 60,000 preschool children were in day-care or prekindergarten programs in Connecticut. Of the total, 73 percent were in licensed day-care centers or group day-care homes, 18 percent were in licensed family day-care homes, 5 percent were in public school prekindergarten programs and 4 percent were in independent school prekindergarten programs. Only those prekindergarten programs in public and independent schools report enrollment annually to the State Department of Education. While this enrollment represents only a small percentage of the prekindergarten and day-care programs in operation, the following table reflects the increases in this portion of the total prekindergarten enrollment over the past decade. The reported 1987-88 enrollment of 6,779 was the highest ever, with more than half of the students in public schools.

Prekindergarten Enrollment* in Connecticut's Public and Nonpublic Schools

Year	Public Schools	Nonpublic Schools	Total
1987	3,830	2,949	6,779
1986	3,831	2,578	6,409
1985	3,361	2,549	5,910
1984	3,178	2,375	5,553
1983	3,190	2,406	5,596
1982	3,811	1,954	5,765
1981	3,888	1,747	5,635
1980	4,371	1,601	5,972
1979	4,390	1,517	5,907
1978	3,828	1,581	5,409
1977	3,808	1,272	5,080

* Reported as of October 1

Source: Connecticut Department of Education

Early intervention for developmentally delayed children and children from low-income families is generally recognized to be beneficial. These children have been identified as a population group more likely to be at risk of school failure and dropping out before graduation. Children who come from poverty tend to enter school with a series of deficits. Preschool preparation assists in enriching a child's cognitive, social, emotional and health development, and gives children living in poverty a chance at an even start when they enter school. The State Board of Education, as one of its five-year goals, seeks to improve and expand early childhood education programs.

In 1987-88, Head Start served 4,291 Connecticut children ages 3-5 who met low family income eligibility requirements. It is believed, however, that only one-quarter of all eligible children are actually served. It has been estimated (Business Week, September 19, 1988) that for every dollar invested in programs like Head Start, more than four times that amount is saved in public assistance, special education and other costs. Also, children enrolled in such programs are more likely to graduate from high school and be employed following school completion.

Extended-day kindergarten programs have been shown effective in providing students, particularly low-income students, with an opportunity for a better start on their education. In 1987-88, 42,304 students were enrolled in kindergarten in Connecticut's public schools. In a 1984-85 survey of 551 schools, only 81 (14.7%) of all respondents with kindergartens provided programs of more than four hours per day. The 81

schools, in 17 districts, offered extended-day programs to almost 4,000 children (11% of the state's kindergarten children). A majority of the extended-day programs (58%) were offered in districts in the top quartile of wealth.

By 1988-89, 37 districts were to offer extended-day programs to some of their students. Approximately 2,200 new extended-day slots have been created or supported by a state grant since 1987. The grant has helped to equalize opportunity by supporting programs in eight of the state's 15 poorest districts, including the five largest urban districts.

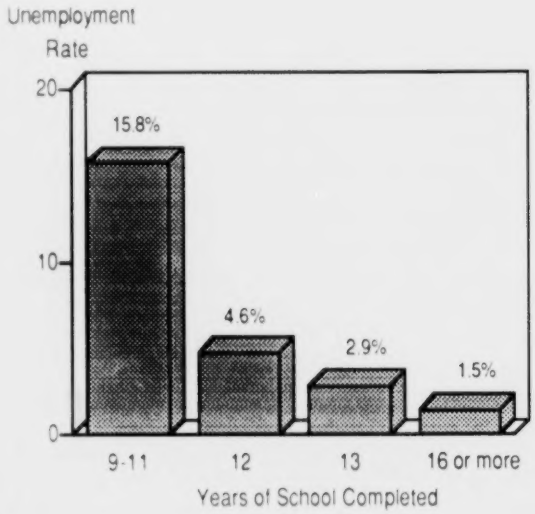
In addition to the youngest segment of the population, the state's adult population (age 25 and over) is growing as the last of the baby boom cohort moves into adulthood. The baby boom includes those born between 1945 and 1964. Correspondingly, the state's median age of 32 in 1980 is expected to rise to 35 in 1990 and continue to be one of the highest median ages in the nation.

The State Board of Education's goals of improving and expanding adult education and improving skills for future employment address the needs of Connecticut's population as well as the state's increasingly technical economy. The 1980 census clearly shows the relationship between high school completion and English proficiency. An equally strong relationship exists between the level of education and labor force experience. High school dropouts experienced an unemployment rate more than triple that of high school graduates. Residents with limited English proficiency experienced an unemployment rate more than double that of those who spoke English well, were more likely to be out of the labor force, and if employed were in lower-paying occupations.

Many programs designed to serve undereducated youth and adults target students who are economically as well as educationally disadvantaged. Services are provided in the areas of literacy and remedial skills as well as occupational training. An estimated 310,000 adults (over age 25) have completed less than eighth grade, and an additional 254,000 have some high school but did not graduate (1980 census). Also according to the 1980 census, an estimated 40,000 out-of-school youth and adults (ages 18-64) in Connecticut had limited English proficiency, with estimates of up to 56,000 for 1987-88. The Department's adult education programs provide instruction and support services in literacy and academic basic skills preparation, English as a second language (ESL) and high school completion preparation for anyone over age 16 and out of school. In fiscal year 1988, an estimated 48,000 adults received instruction in school districts, community-based organizations and correctional facilities.

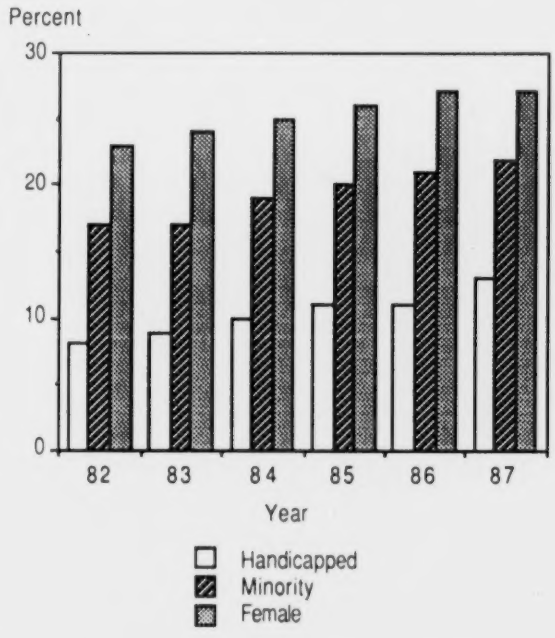
The regional vocational-technical school system offers both secondary and adult programs providing specific occupational training in conjunction with high school completion. The vocational-technical school system currently enrolls 7.8 percent of the state's total public school students in Grades 9-12, and has

Unemployment Rate by Years of School Completed Connecticut, 1985



Source: *Jobs for Connecticut's Future* (1986)

Handicapped, Minority and Female Vocational-Technical School Students, Grades 9-12



Source: Connecticut Department of Education

made substantial progress in increasing enrollment of minority, female and handicapped students. From 1982 to 1987, the percentage of females enrolled rose from 23 percent to 27 percent; the percentage of minorities rose from 17 percent to 22 percent; and the percentage of students with disabilities rose from 8 percent to 13 percent (see graph, page 3).

The State Board of Education also serves the vocational rehabilitation and independent living needs of individuals with mental and physical disabilities. An estimated 58,000 individuals could benefit from the services provided by the Division of Rehabilitation Services (DRS). With current funding levels, the division's vocational rehabilitation programs serve approximately 15,000 people per year, assisting them to become productive and self-sufficient. Vocational training is a major service provided to clients in the division's effort to prepare them for gainful employment. Training services include general, vocational, college and on-the-job training. Annually, one out of three persons served by DRS completes training and finds a job. The other two-thirds are involved in evaluation, assessment or therapy; receiving technological aids or devices; or seeking appropriate employment. There is a close connection between rehabilitation programs and the special education, vocational education and adult education programs administered by the Department.

Connecticut's Economy

Connecticut's diverse industries, supported by a skilled, productive work force, have resulted in robust economic growth. The state's technology-based manufacturing firms, broad-based service sector and strong insurance and finance companies provide a wide range of job opportunities for residents. Employment in Connecticut has increased by an average of two percent per year for the last 16 years.

The state's 1987 per capita income of $20,980 was the highest in the nation, while the unemployment rate of 3.3 percent was among the nation's lowest. Other indicators show Connecticut's strengths (see table, above right).

Continued economic improvement is forecast through the end of the decade, with employment expected to grow about one percent (18,000 jobs) per year for the balance of the century. Manufacturing (particularly high-technology, defense-related and export production) will continue to employ more than 400,000 workers and is expected to show slow, stable growth. The service sector, notably health and other high-skill occupations, is expected to be the fastest-growing employment sector. Finance and insurance are expected to represent a stable and significant component of the state's economy.

One challenge is to sustain this growth in the context of current demographic trends and their effect on the state's ability to provide a work force that is adequate both in numbers and skill level. The last of the baby boomers are currently entering the labor market, and as a result of declining birthrates, a decline in the number of people entering the labor force is expected through 2010. A study, *Jobs for Connecticut's Future*, projects that from 1985 to 1995, the labor force will grow only 10 percent while the number of jobs will grow 15 percent. Many companies are already facing labor shortages in particular occupations.

Economic and Demographic Indicators

Connecticut's Rank Nationally	Indicator
1	Per capita personal income
4	Population density
5	Per pupil public school expenditures
6	Export-related employment as a percent of total manufacturing output
7	Percent of personal income derived from manufacturing; Total defense-related prime contract awards
27	Population
46	Percent of population under 18 years old
47	Birthrate
48	Unemployment rate

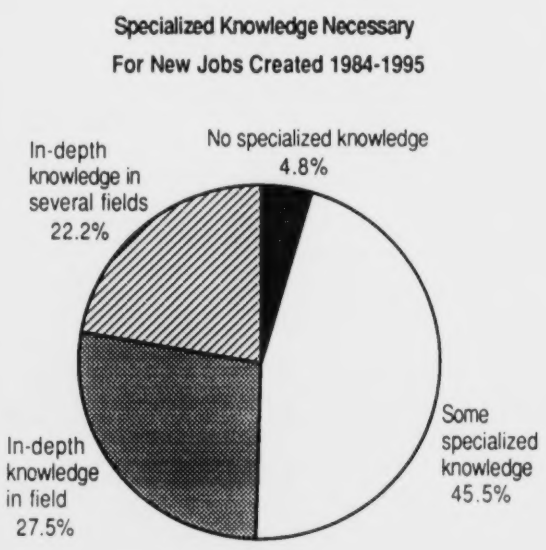
Source: Connecticut Department of Economic Development (1988)
Institute for Educational Leadership, Inc. (1988)

Pervasive throughout the workplace, technology is increasing the skill level required in most jobs. In the past, the unskilled and poorly educated could get jobs; in the future, very few new jobs will be created for those who cannot read, follow directions and use mathematics (and such jobs will offer low wages). An additional requirement for Connecticut jobs in the high-skill service occupations, where job growth is expected to be the fastest, is strong communications and interpersonal skills. The highly publicized report *Work Force 2000* (Hudson Institute, 1987) concludes that the jobs of tomorrow will belong to those "who can read, write and think." Nationally, for the first time in history, a majority of new jobs require postsecondary education, and prerequisite education requirements are expected to continue to increase. While the median years of schooling required for today's jobs is 12.8 years, 13.5 years will be the median requirement by the year 2000.

In addition to projecting the number of jobs expected, *Jobs for Connecticut's Future* identified the skill level which will be

necessary for new jobs created between 1984 and 1995. Only 4.8 percent of the new jobs will require no specialized knowledge, with almost half (45.5%) requiring some specialized knowledge (for example, licensed practical nurses or secretaries). The remaining half of all new jobs will require either in-depth knowledge in one field (for example, construction trades or accounting) or in-depth knowledge in several fields (engineering and law).

While the state has prospered, all segments of the state's population have not benefited from this prosperity. Connecticut



Source: *Jobs for Connecticut's Future* (1986)

boasts the highest per capita income ($20,980) in the United States. According to the 1980 census, however, Hartford is ranked the 4th poorest city in the nation; New Haven, the 7th poorest; and Bridgeport, the 26th poorest. In these three cities, according to the 1980 data, 20 percent of the families live in poverty; 28 percent speak a language other than English at home; and 46 percent are headed by single parents. Poverty is a tragic reality for many of Connecticut's urban residents. Students in these cities also have the lowest educational attainment. These cities house 13.0 percent of the state's population, 13.1 percent of the state's K-12 students, 49.7 percent of the state's minority students, and (according to 1987-88 data) 55.8 percent of AFDC recipients age 5 to 18.

Many minority families are forced by factors related to economic development, housing, zoning and transportation to live in poor urban communities. The state is presently experiencing labor shortages, with a statewide unemployment rate (3.3%) considerably below what economists generally acknowledge as full employment. However, the unemployment rates for minorities and the poorly educated continue to be disproportionally high as a result of the mismatch between the lower skills the unemployed have and the higher skills employers need. In addition, unemployment rates understate the problems of the minority population because many people — feeling that they would be unable to attain employment — remain outside the labor market. Consequently, poverty is a common characteristic of many minority families whose members often lack the education and training to successfully compete for available jobs leading to economic self-sufficiency.

Other changes in the composition of the work force will continue as well. In the past, most labor force entrants were between 16 and 24 years old, ending their formal education and beginning careers. With current and projected declines in the size of this age group, employers will have to look beyond this group to meet their needs. The labor force of the next several decades will consist of proportionately more minorities, women and older workers.

To assist in meeting the education and training needs of the state's workers and employers, the State Department of Education has identified improving skills for future employment as a major goal. A continuum of education programs and support services is provided, from basic skills through advanced occupational training. Vocational programs are offered on the secondary level at the state's comprehensive high schools, and on both the secondary and adult levels at the 17 regional vocational-technical schools. Vocational education recruitment efforts continue to focus on women, minorities and persons will disabilities. In addition, other programs address the needs of specific populations. These programs include Jobs for Connecticut's Youth and the Job Training Partnership Act, which provide training for economically disadvantaged individuals.

Connecticut's Schools and Students

Public elementary and secondary education in Connecticut is provided primarily by 166 local and regional school districts. In addition, three privately-endowed academies — the Gilbert School in Winsted, Norwich Free Academy and Woodstock Academy — serve public high school students. Public school systems in Connecticut are not fiscally autonomous; their budgets are funded and approved as part of the operations of their local municipalities.

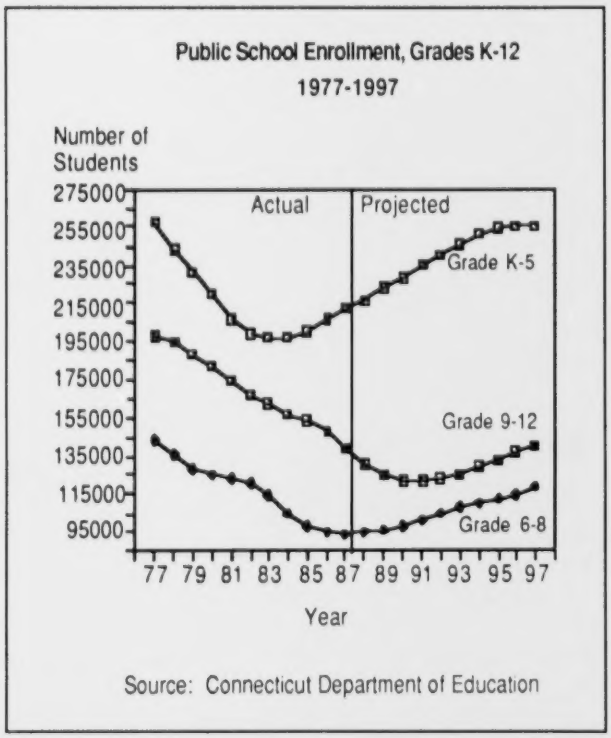
Seventeen state-operated regional vocational-technical schools provide publicly funded secondary education which includes specialized vocational training. These schools also provide adult programs. In addition, 18 vocational agriculture centers are located in public high schools but serve students regionally. Many public high schools also operate elementary and secondary school programs for adults that lead to an adult high school diploma. Unified school districts have been organized by the Departments of Correction, Mental Retardation, and Children and Youth Services for the education of children within their jurisdictions.

Complementing the state's elementary and secondary public education network are its 377 nonpublic schools. The three dioceses of the Catholic church operate 186 schools. There are also 35 Christian Academies, 23 schools with other religious affiliations, 77 independent private schools and 56 private special education facilities.

Of the 539,468 Connecticut residents enrolled in the state's elementary and secondary schools, 84.6 percent attend local public schools, 13.2 percent attend nonpublic schools and 2.2 percent attend regional vocational-technical schools.

A major consequence of the recent dynamics of demographic change is a continued decline in school-age children and school enrollment. The latest enrollment projections made by the Connecticut Department of Education show an upward revision due to an apparent reduction in out-of-state migration of families and more births than expected during the mid 1980s. Total enrollment in the state's public schools in kindergarten through Grade 12, which peaked in 1971 at 675,949, dropped over 200,000 by 1987 to 468,325. It was expected to fall again in 1988, but then rise to 531,323 by 1999 as the "baby boomlet" cohort moves through the schools. (Enrollment is then expected to begin a moderate decline.) The 1999 total enrollment of more than 531,000 is projected to be about 63,000 higher than the 1987-88 level but 85,000 lower than 1977-78.

As the student population declined through the 1970s and 1980s, there was a corresponding net reduction in the total number of public schools. From 1976 to 1986, 160 elementary schools, 17 middle/junior high schools and 4 high schools closed. However, in 1987 the period of public school building closings appears to have ended with the addition of four elementary schools. This reflects the upswing in the kindergarten to Grade 5 population.



Source: Connecticut Department of Education

The State Board of Education has adopted major goals relating to the improvement of the quality of curriculum and instruction and ensuring equity for all children. Connecticut's commitment to the state's children reflects a continuing effort to reduce the level of disparity in educational opportunities among school districts and to develop high-quality public school programs for all children. In virtually all education grant programs, more state aid is provided to poor towns to equalize their ability to provide educational opportunity.

Information on Connecticut's teachers, elementary and secondary education programs in the state, curriculum improvement and evaluation of achievement is provided in subsequent chapters. Implications for various student subpopulations are described below.

The combined incidence of poverty, racial isolation and limited English proficiency present major challenges to the provision of equal educational opportunities, particularly for children in our urban communities. In the 1987 administration of the Connecticut Mastery Test, white students outperformed black and Hispanic students by a substantial margin in reading/language arts, writing and mathematics. In addition, economically disadvantaged students, as measured by participation in the free or reduced-price school lunch program, generally scored substantially lower than other students. One in ten of the state's students are in families receiving Aid to Families with Dependent Children, a total of 45,615 children in 1987-88.

While minorities represent 11 percent of Connecticut's total population, they represent over 23 percent of the public school enrollment (see graph, page 7). The minority population is also the fastest growing segment of the state's population, increasing 1.5 percent annually and expected to represent 25 percent of the student population by 1990. The Hispanic segment is increasing most rapidly. One in four of the 1987 kindergartners, the graduating class of the year 2000, is a minority child.

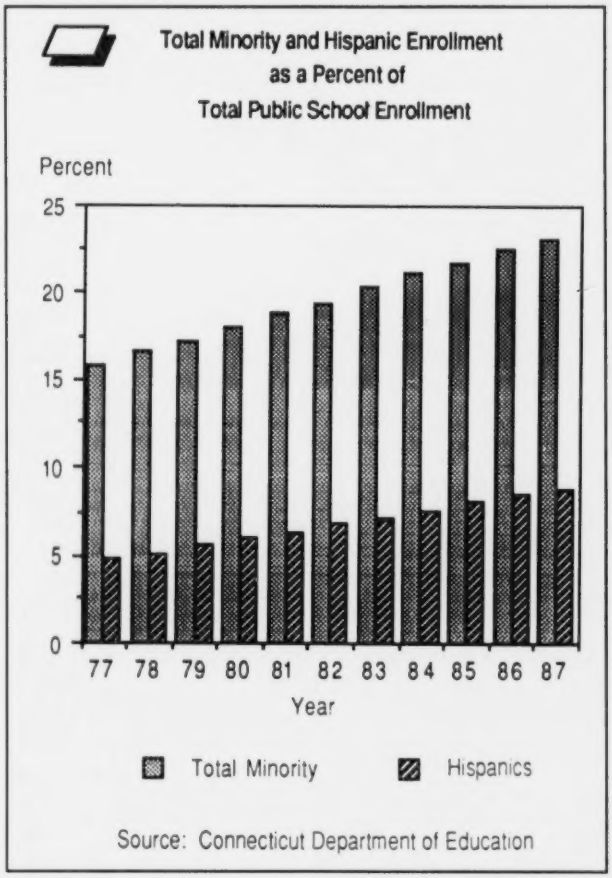
From 1977-87, the number of Hispanic students in Connecticut's public schools rose 37.8 percent, while the number of whites declined 30.5 percent and the number of blacks declined 9.5 percent. Enrollment of other minority students (Asian Americans and American Indians) rose 140.9 percent over the same time period, reflecting increased immigration and relocation of refugee families.

Fourteen of the state's 166 school districts are home to 29 percent of the state's total student population, 80 percent of the minority student population and 80 percent of the children receiving AFDC benefits. The graduation rates (school retention rates between ninth grade and graduation) for blacks and Hispanics in the State (61.1% and 48.2% respectively) have consistently been below the graduation rate for whites (currently 82.5%). This places minorities at a strong disadvantage in a labor market which increasingly requires strong cognitive and critical thinking skills.

Over the past decade, the State Department of Education has rigorously monitored local school districts for compliance with the state's racial imbalance law (Section 10-226 a-e, C.G.S., 1969). The number of racially imbalanced schools in the state

had gone from 71 in 1977 to 15 in 1986 but rose to 18 in 1987. A total of nine districts have been cited for noncompliance and required to develop and implement plans to correct racial imbalance; six of these have successfully balanced their schools. Although efforts to date have not been able to provide all the state's minority students with an integrated school environment, the recent report, *Racial/Ethnic Equity and Desegregation in Connecticut's Public Schools* (State Department of Education, 1988), puts forth recommendations for action such as providing substantial financial incentives, technical assistance and interagency planning to promote voluntary, racially balanced educational experiences for all Connecticut students.

Another segment of the state's student population requiring special assistance is the limited English proficient. In 1987-88, 12,049 students were enrolled in state-mandated bilingual education programs. An additional 875 limited-English-proficient students were identified, but school districts were not required to provide bilingual programs for them, since there were fewer than 20 in any one school.



This chapter has presented the context within which education occurs in Connecticut, and has highlighted changes in the state's population, economy, schools and students that have an impact on education. Subsequent chapters provide detailed information on Connecticut's Teachers (Chapter 2), Student Achievements (Chapter 3), Programs (Chapter 4) and Finance (Chapter 5). Chapter 6 presents an update on progress toward implementing the State Board's goals by documenting and interpreting trends in statistical measures identified as indicators of success.

Connecticut's Teachers

Teachers are the key to Connecticut's education reform.

In the past four years, this state has made a significant commitment to ensuring the highest possible quality of teaching for all students. The commitment starts with making the teaching profession more attractive to those making career decisions, proceeds into the preparation of those who choose to become teachers, and continues into a teacher's induction and career with professional development, career incentives and a professional evaluation process.

The Education Enhancement Act of 1986 has made teacher salaries more competitive with salaries in other professions. Starting salaries across the state equal or exceed $20,000, while midcareer salaries in excess of $40,000 are common. As a direct result of the Act, these salaries are now available in Connecticut's less affluent urban and rural districts as well as in traditionally wealthier suburban communities. An alternate route to certification is now open to a limited number of people with strong subject matter backgrounds and other qualifications, and improved salaries are providing an incentive to choose this option.

Paralleling the enhancement of teachers' salaries have been several initiatives to make the preparation to become a teacher more rigorous. Before entry into a teacher preparation program in Connecticut, and before receiving Connecticut certification to become a teacher, candidates must pass the Connecticut Competency Examination for Prospective Teachers (CONNCEPT). This test assesses teachers' knowledge of the essential skills in reading, writing and mathematics. (Candidates with an SAT score of more than 1,000 or an ACT composite score of 24 or more receive waivers of this requirement.) The pass rate of about 66 percent indicates that this test is one of the most rigorous in the nation.

The standards for teacher preparation programs have been revised to require a major in the intended subject area and a curriculum which addresses the Connecticut Teaching Competencies, 15 skills which a teacher must develop in order to earn a provisional educator certificate (the second step in the new three-tier certification system). A Cooperating Teacher Program has been developed to provide student teachers with support, evaluation and feedback in their first classroom experience.

Subject matter testing — the CONNTENT examinations in 23 subject areas — will be phased in between December 1988 and May 1990. Prospective teachers will have to meet the

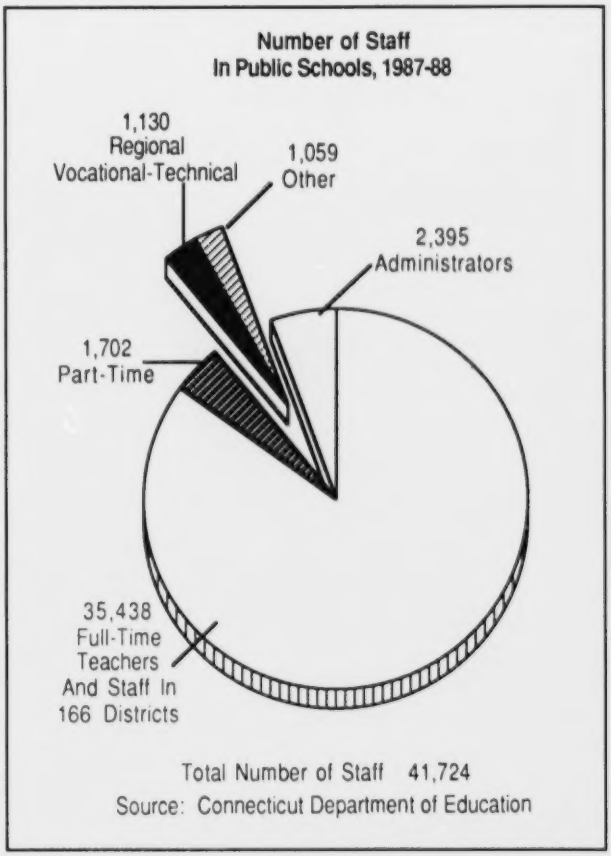
CONNTENT requirement prior to receiving a newly established one-year initial teaching certificate.

Upon entering the classroom, Connecticut's teachers will be supported by several new induction and career initiatives. The Beginning Educator Support and Training (BEST) program will provide a beginning teacher with a mentor to serve as a role model, resource, peer coach and confidant. The mentor will help the beginner to develop and apply the teaching skills outlined in the Connecticut Teaching Competencies. Six trained assessors will conduct classroom observations to judge whether the new teacher's proficiency is sufficient to earn an eight-year provisional educator certificate.

An experienced teacher will be granted a professional educator certificate upon the completion of 30 hours of additional college-level study in accordance with the requirements of the specific endorsement area, plus three years of successful teaching under Connecticut's provisional educator certificate. The professional educator certificate will be valid for five years and renewable upon completion of 90 hours of continuing education units (CEUs). The state's Institute for Teaching and Learning gives teachers and administrators the opportunity to develop new skills and earn CEUs. State grants to local districts also provide for local professional development, career incentives and teacher evaluation.

A more detailed discussion of these initiatives — known collectively as The Connecticut Continuum: Connecticut's Commitment to the Teaching Profession — appears in Chapter 4.

The data provided in the following sections of this chapter highlight both the conditions that have made this monumental reform necessary and initial feedback about the impact of the changes. These data will provide the baseline statistics against which the success of the reform will be measured.



Teacher Profile

In 1987-88 there were 41,724 people employed in certified professional positions in the public schools of Connecticut. This includes 39,535 full-time and part-time staff in the state's 166 local and regional school districts, 1,130 in the 17 regional vocational-technical schools, 425 in regional educational service centers, 239 in the three endowed and incorporated academies, and 395 in the three Unified School Districts run by the Departments of Correction, Mental Retardation, and Children and Youth Services. For historical continuity, many of the analyses that follow will concentrate on the 35,438 full-time teachers and support staff employed in the local and regional public schools.

The number of full-time staff in the local and regional school districts has grown for the past four years, after five years of decline. The increase can be attributed to increased hiring of elementary teachers in reponse to the increase in elementary enrollment and, for those districts with low staffing ratios, an influx of state funds to hire more staff under the Education Enhancement Act of 1986.

The 1987 count of full-time professionals (teachers and support staff plus administrators) in the local public schools, 37,833, is more than five percent above the 1983 low, but 4.4 percent below the 1978 count. The number of special education teachers has increased for nine consecutive years, while the number of vocational education teachers has declined by 19.3 percent since 1978. Both vocational and content area teachers would have been expected to decline with the decline in secondary enrollment in that period. However, the shift in graduation

Number of Full-Time Staff in the 166 Local and Regional School Districts

	1978	1987	Percent Change
General Elementary	13,186	11,977	- 9.2
Content Specialist	15,613	14,167	- 9.3
Special Education	2,881	4,248	+ 47.4
Vocational Education	2,930	2,365	- 19.3
Total Teachers	34,610	32,757	- 5.4
Support Staff	2,683	2,681	- 0.0
Administration	2,285	2,395	+ 4.8
Total Staff	39,578	37,833	- 4.4

Source: Connecticut Department of Education

requirements for the class of 1988 seems to have moderated the reduction in content-area teachers while accelerating the decline in the number of vocational education teachers.

The number of part-time positions has increased steadily since 1978. The 166 local and regional public school districts employed 1,702 people in part-time positions in 1987-88. This number has risen 38.8 percent since 1978 and now represents 4.3 percent of the professional positions compared to three percent in 1978. These increases are not limited to a few subject areas. They appear to represent a reduction in the needed number of course sections due to declining middle school and secondary enrollments.

Women comprise an increasingly greater percentage of the staff. In 1987, about four of five new staff were women, bringing the total percentage female to 65.2 percent, compared to about 60 percent in the late 1970s. Part of the reason for this rise is the recent increase in staff in areas traditionally dominated by women (elementary and special education teachers) and the decline in the number of vocational education teachers, an area that has been more than 55 percent male.

In 1987 minorities filled 2,356, or 6.2 percent, of the full-time professional positions in the local and regional school districts. Ten years ago minorities represented 5.1 percent of the staff. Today, minorities represent less than five percent of the staff in 40 of 61 nonadministrative areas. Minorities represent more than ten percent of the teachers in programs for the bilingual (66.1%), Spanish (13.2%), health occupations (13.2%), government/law (12.2%), and blind (11.1%), and 18.7 percent of the social workers.

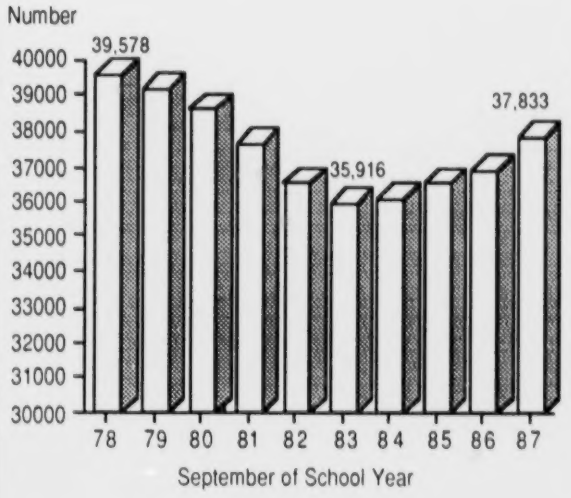
Although the percentage of minorities in the teaching profession is less than the percentage of minority students (23.2% in 1987) and below the percentage of minorities in the general population (11.8% according to the 1980 census), it is roughly comparable to the 5.2 percent of all people with a college degree who are minorities (according to estimates from the 1980 census).

Trends in the summary statistics on the staffing characteristics of age, experience and educational attainment are affected by changes in staffing level and the hiring preferences of districts. As the number of teaching positions declines, there is a reduced need for new staff; when layoffs are needed, the least senior staff are the first released. Those released are likely to be younger, less experienced and have less formal education than the staff retained. Connecticut districts have also shown a preference for hiring experienced teachers when they are available. A study of new and returning teachers found that more than 75 percent of teachers hired for September 1986 had some prior teaching experience.

Since 1978, the mean age of the staff has increased from 38.4 to 42.9 years, the mean years of teaching experience in a Connecticut public school have increased from 10.0 to 13.9 years, and the percentage of the staff with an advanced degree has increased from 64.9 to 75.3 percent. As the staff ages, there are increasing concerns about the possibility of a growing number of retirements and finding people to fill the vacant positions. In 1987, 1,433 full-time teachers had a combination of age and experience that would qualify them for regular retirement. Fortunately, many of our teachers choose to teach well after they are eligible to retire.

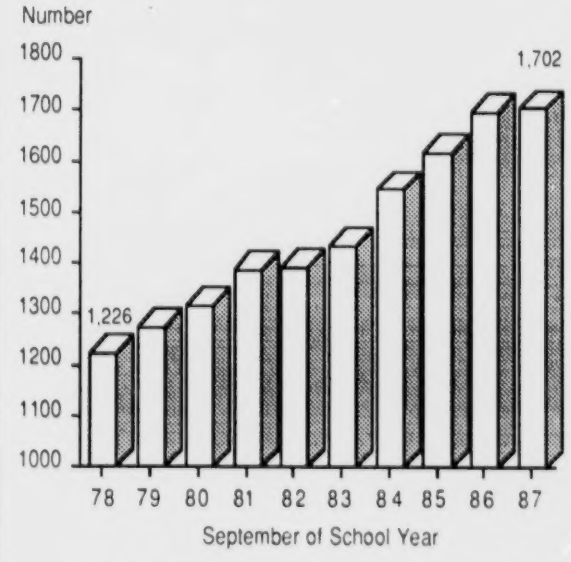
Staffing ratios have improved each year in Connecticut since they were first tracked in 1978. The improvement is due

Number of Full-Time Professional Staff*
In the 166 Local and Regional School Districts



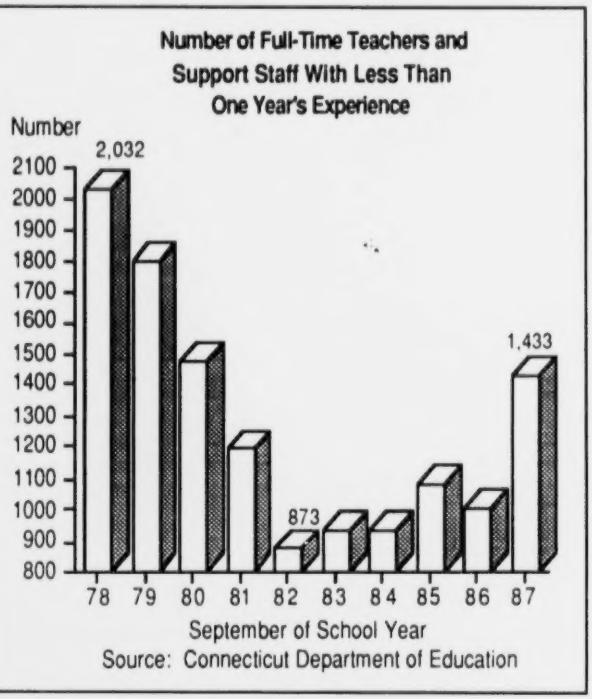
*Includes administrators
Does not include staff of state vocational-technical schools.

Number of Part-Time Professional Staff



Source: Connecticut Department of Education

to several factors. Generally, districts hire staff in direct response to enrollment increases, but release staff more slowly as enrollment declines. In secondary schools, the breadth and sequence of programs are often retained despite enrollment declines. The resulting small classes increase the staffing ratio.



Parents and teachers have shown a preference for small class sizes in the elementary grades. Originally these were obtained by retaining staff while enrollments fell. Now these small class sizes are being maintained by increased hiring as elementary enrollment increases.

Characteristics of Teachers and Support Staff

Year	Mean Years CT Experience	Percent With Advanced Degrees	Mean Age
1987	13.9	75.3	42.9
1986	13.8	75.0	42.6
1985	13.6	74.7	42.2
1984	13.4	74.3	41.9
1983	13.1	73.4	41.4
1982	12.6	72.0	40.8
1981	11.8	70.4	40.1
1980	11.3	69.0	39.5
1979	10.7	67.1	38.9
1978	10.0	64.9	38.4

Source: Connecticut Department of Education

The teacher-pupil ratio grant of the Education Enhancement Act of 1986 also has caused the overall staffing ratio to improve. In school years 1986-87 through 1988-89, the grant provided to 43 districts with the poorest staffing ratios $25,000 per professional hired (below the level of superintendent) over a 1985-86 baseline, to a statewide maximum of 720 positions. With funds from this grant, these districts added 205.9 full-time equivalent (FTE) staff in 1986-87 and an additional 231.7 FTE staff in 1987-88.

Staffing Ratios in the Local and Regional Public Schools

Year	Teachers Per 1,000 Students	Support Staff Per 1,000 Students
1987	73.6	6.1
1986	71.4	5.8
1985	70.1	5.7
1984	68.8	5.6
1983	67.2	5.4
1982	66.4	5.4
1981	66.2	5.3
1980	65.0	5.2
1979	63.5	5.1
1978	61.5	4.8

Source: Connecticut Department of Education

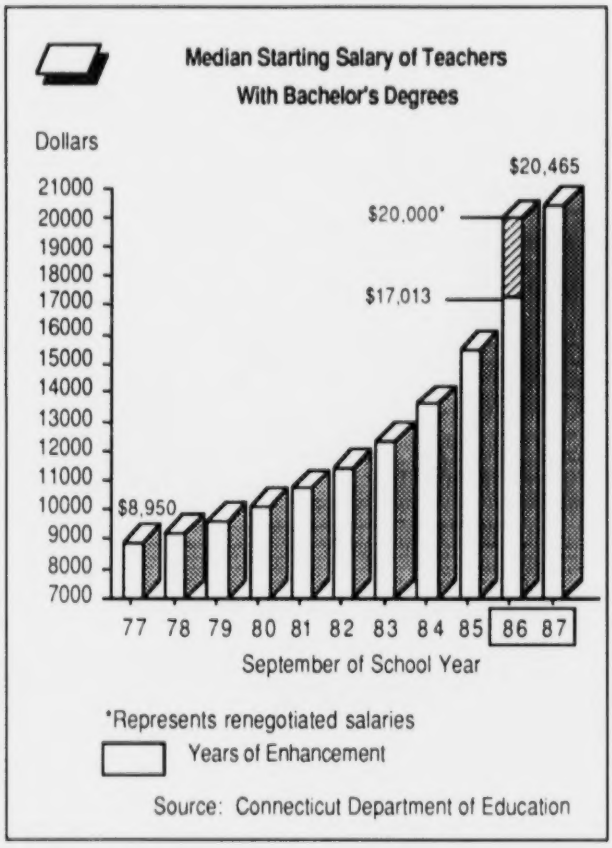
Between 1978 and 1987 the number of teachers per 1,000 students improved from 61.5 to 73.6, an increase of almost 20 percent. This is equivalent to an improvement in the student/teacher ratio from 16.3:1 to 13.6:1. Concurrently, the support staff per 1,000 students improved from 4.8 to 6.1. This is equivalent to a reduction in caseload from 208 to 164 students for each counselor, psychologist, social worker and reading consultant.

Compensation

Even before the passage of the Education Enhancement Act of 1986 (EEA-86), starting and average salaries of full-time teachers and support staff in the local and regional public school districts had started to grow at a rate exceeding inflation. By directing funds to the least wealthy and lowest-paying school districts, the Act made it possible for less affluent districts to make significant improvements in their salary schedules.

The Education Enhancement Act fully funded the cost, and provided other financial incentives, to towns that voluntarily agreed to raise their starting salaries to $20,000 by 1988-89.

(The designated minimum was $21,500 in towns where the average household income exceeded the state average by 75 percent.) Before enhancement in 1986, only eight districts had starting salaries of $20,000 or more. In 1986, 91 districts



renegotiated their starting salaries to meet the state targets. By 1987-88, 160 of the state's 166 districts had starting salaries of $20,000 or more; by 1988-89, all districts were to have reached that level.

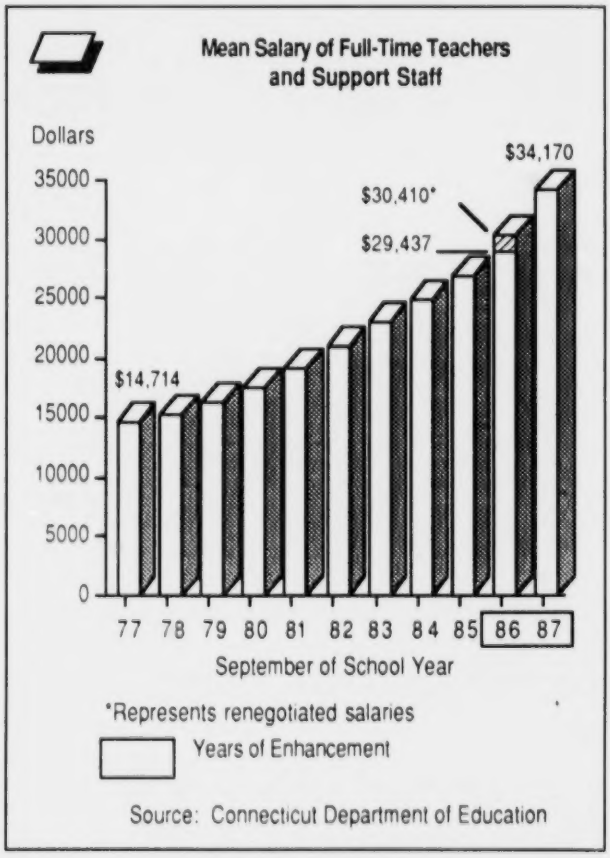
In 1987-88, starting salaries ranged from $17,745 to $24,062; the median starting salary of $20,465 represented an increase of 20.3 percent over initial 1986 levels. Since 1980-81, the median starting salary has more than doubled.

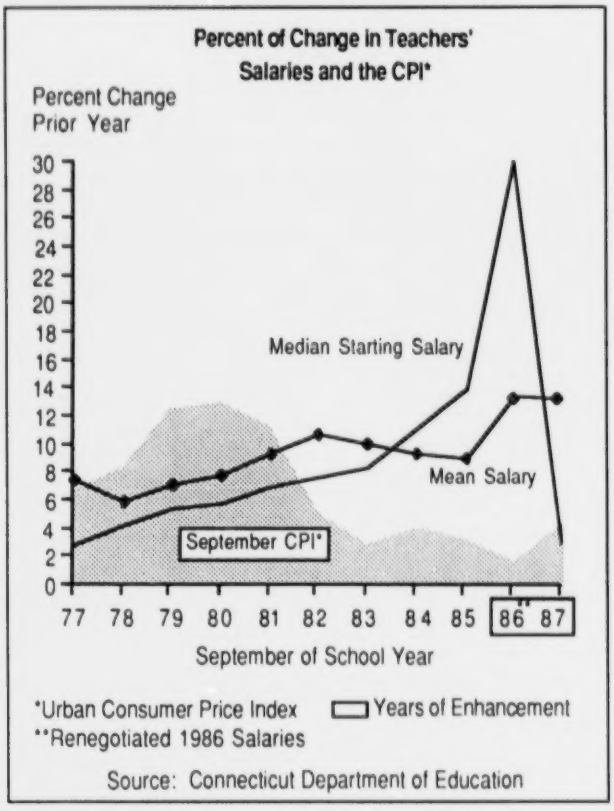
The Education Enhancement Act granted towns $31.4 million in 1986-87 and $63.0 million in 1987-88 to improve the salaries of experienced teachers. The mean salary paid to full-time teachers and support staff in the local and regional public schools was $34,170 in 1987-88. This mean increased by 16.1 percent over the 1986-87 pre-enhancement level; in the 1976-1986 period, the increase in mean averaged 7.9 percent annually. The mean salary is influenced by changes in the experience and education of the staff. In periods of reduction, the mean will be artificially inflated; in periods of hiring, it tends to be artificially deflated. From the 1986-87 pre-enhancement level to 1987-88, the average salary increase of teachers continuing as teachers was 19.1 percent.

The improvement in Connecticut's teachers' salaries is dramatic compared to the rest of the country. The National Education Association has reported that Connecticut's salary growth in the past ten years (134%) led the nation. The 16 percent increase from the 1986-87 pre-enhancement level to the 1987-88 level far exceeded the national average of 5.6 percent. Connecticut salaries now rank 4th behind Alaska, the District of Columbia and New York. Ten years ago the state ranked 13th; just before enhancement, it ranked 7th.

The salary analysis by the American Federation of Teachers provides a different perspective. When compared to earnings in the private sector, Connecticut's teachers' salaries fall near the national average. When compared to the state's per capita personal income, Connecticut's teachers' salaries are ranked 47th. When the AFT adjusts salaries for differences in cost of living, Connecticut's salaries rank 18th in the nation.

Teachers' starting and average salaries tend to lag behind inflation when inflation is high and exceed inflation when it is low. In the last six years, with inflation running at five percent or less, increases in both starting and average salaries have exceeded inflation. The recent increases in starting salaries have finally offset the relatively low rates of increase observed prior to 1982. The median starting salary in 1987-88 was more than $3,700 above the inflation-adjusted median starting salary of ten years ago. The 1987-88 mean salary of teachers was more than $6,600 above the inflation-adjusted 1977 mean. The reasons for





the differences in the relative growth of the mean salary versus the starting salary are (1) the mean has been artificially inflated by the changes in the composition of the staff, and (2) local board-union negotiations tend to concentrate on increasing the salaries of those already teaching rather than of those entering teaching.

Ratio of Administrators to Staff

September of School Year	Number Full-Time	Full-Time Equivalent Administrators Per 100 Nonadministrators
1987	2,395	7.6
1986	2,375	7.8
1985	2,360	7.8
1984	2,260	7.0
1983	2,278	7.2
1982	2,287	6.7
1981	2,308	6.5
1980	2,328	6.4
1979	2,300	6.1
1978	2,285	6.1
1977	2,274	6.1

Source: Connecticut Department of Education

The starting and midcareer salaries of teachers tend to lag behind the salaries paid to state workers in positions requiring comparable education. In 1987, selected entry-level state positions requiring a bachelor's degree in the area of specialization and no experience ranged from $20,165 for a career trainee to $24,462 for a computer programmer intern or clinical nurse. The salaries paid after about 10 to 12 years of state service ranged from $33,809 for a librarian or social worker to $39,686 for a Personnel Officer II.

Teachers' Salaries Compared to Salaries of State Employees — 1987

	Salary 1980	1987
Starting Position		
Teacher (Mean Salary)	10,155	20,712
Connecticut Career Trainee (Bus. Admin., Accounting)	12,286	20,165
Computer Programmer Intern	15,774	24,462
Engineer Intern	15,033	23,314
Social Worker Trainee	11,850	22,194
Clinical Nurse	14,311	24,462
Midcareer		
Teacher (Mean Salary)	19,025	35,470
Senior Accountant	22,812	38,771
Civil Engineer	21,808	37,041
DP Systems Analyst I	25,001	38,771
Librarian	18,920	33,809
Personnel Officer II	25,984	39,686
Social Worker	19,799	33,809

Source: Connecticut Department of Education

The gap between teachers' salaries and those in other professions should narrow in the next few years. In the final year of salary enhancement (1988-89), the Connecticut Education Association expected starting salaries to rise by 7.5 percent and salaries at the top step of the master's degree schedule to rise 11.1 percent. State salaries increased about five percent annually and pay increases for salaried workers in the private sector nationally averaged 5.5 percent in 1987, according to The Conference Board.

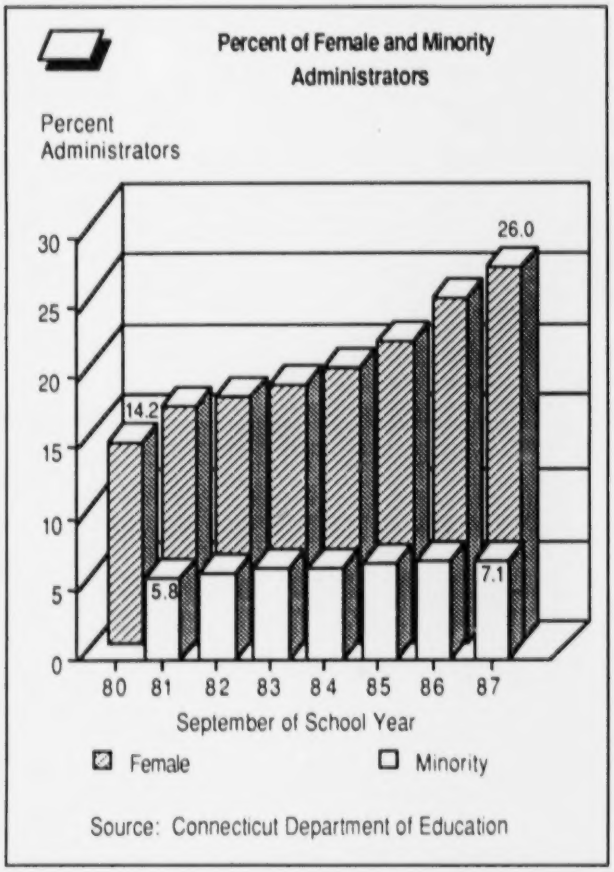
Administrator Profile

In 1987 there were 2,395 full-time administrators in the local and regional school districts. This represented 6.3 percent of the professional staff. The changes in the number of administrators reflect not only actual changes in the number of positions, but

also more accurate reporting of administrative positions. For example, in 1985, 65 administrators were added because school business official became a certifiable position.

From 1977 to 1985, the ratio of full-time equivalent administrators (which includes teachers with secondary administrative assignments such as unit leader or department chairperson) increased from 6.1 to 7.8 administrators per 100 teachers and support staff. The ratio then fell to 7.6 per hundred in 1987 as districts increased the hiring of nonadministrative staff.

The "typical" administrator is a 48-year-old white male with a 6th year certificate, 20.8 years of combined teaching and administrative experience in Connecticut, and a salary of $50,760.

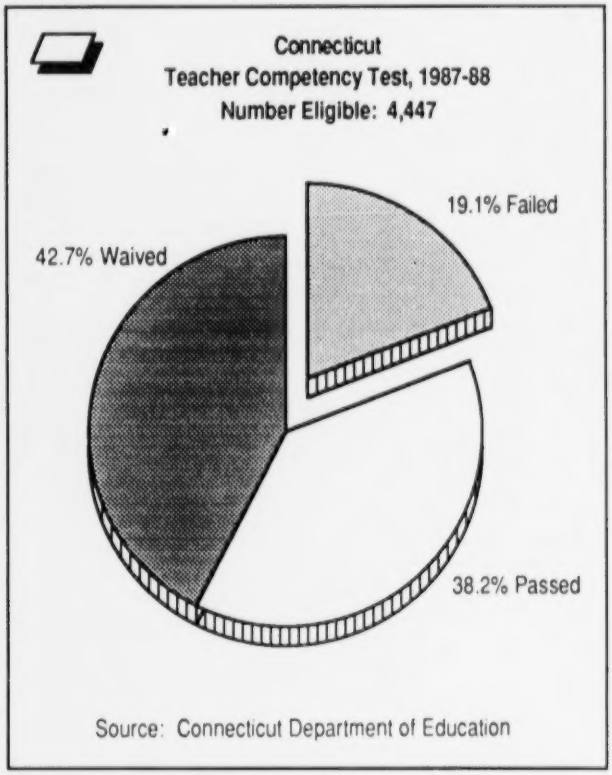


Source: Connecticut Department of Education

In recent years, representation of females and minorities in administration has increased. In 1987-88, 26.0 percent of administrators were women, compared to 17.5 percent five years ago. The 166 school districts now employ 169 minorities in administrative positions. This represents 7.1 percent of all administrators, a percentage higher than that of minorities employed in all professional positions (6.2%).

Testing Prospective Teachers

The Connecticut Competency Examination for Prospective Teachers (CONNCEPT) has been designed to ensure that prospective teachers demonstrate competence in the areas of reading, writing and mathematics. It is the first step in a teacher licensure process that will include a subject knowledge test and clinical assessment. The CONNCEPT was first administered in October 1985 and now is given four times annually.



Source: Connecticut Department of Education

Since June 30, 1986, passing CONNCEPT has been necessary for formal admission to a teacher preparation program in Connecticut. Since May 1, 1987, it has been a requirement for certification. Those seeking admission to teacher preparation and those seeking certification are significantly different populations which differ in age and experience. Thus it is inappropriate to compare the annual results of CONNCEPT.

In 1987-88 there were 4,447 people who participated in CONNCEPT. A total of 1,897 (42.7%) received waivers because their combined Scholastic Aptitude Test (SAT) scores were above 1,000 or their American College Testing (ACT) program composite score was at least 24. Of the remaining 2,550 who took the exam, 2 of 3 passed. This plus the number who received waivers results in a passing rate of 80.9 percent. Only 20 percent of the test-takers were male and 9.5 percent were minorities. The low passing rate among minorities (37%) will further cut into the pool of potential minority teachers.

Professional Development

Ongoing and systematic professional development is a major commitment of the State Board of Education. The centerpiece of this effort is the State Department of Education's Institute for Teaching and Learning. This program began in the summer of

1984 with a budget of $500,000. Twenty-four courses in a variety of instructional areas were offered to 600 teachers. In 1987-88 the program offered 154 courses to 3,100 professionals and had a budget of $2.8 million.

The Institute also includes a series of conferences and workshops held throughout the year. During the 1987-88 school year, the Institute presented programs on substance abuse prevention, language arts, children's literature, mathematics, physical education, professional development and the Common Core of Learning to more than 2,500 participants. State-sponsored institutes at local sites were attended by 210 educators, and the three-day program improvement institute on language arts had 49 participants.

The Institute for Teaching and Learning offers two academies designed to help school administrators become more proficient and resourceful educational leaders. In 1987-88 the Connecticut Principals' Academy attracted 2,025 participants to four school-year institutes, seven conferences, a convocation, four mentor programs, two summer institutes and six regional collaboratives. The Connecticut Academy for School Executives presented programs on conflict management, the role of the department chairperson, an interdisciplinary approach to the language arts curriculum, interview skills, and personal managing styles.

Funds from the federal Carl D. Perkins Act support a wide range of preservice and in-service programs and projects designed to provide professional development and technical courses for certification and to increase the competence of vocational education teachers, counselors and administrators. Special emphasis is placed on the integration of disadvantaged students and students with disabilities in regular courses of vocational education.

There also are numerous professional development activities at the local school district level. In 1987-88 districts reported spending $30.2 million or 1.1 percent of their budgets on improvement of instruction. This amount is more than double the amount reported four years ago.

Changes in Professional Staff, 1986 to 1987

Subject Area	Left		New Staff		
	No.	%	Returned Experienced	Inexperienced*	Total
Elem.	563	4.7	516	494	1,010
Math, Physics, Chemistry, Computer Education	104	4.0	58	55	113
Required Secondary	309	4.9	143	177	320
Elective Secondary	277	5.9	161	142	303
Special Education, Bilingual	412	7.6	299	393	692
Art, Music, Physical Education	203	5.3	133	167	300
Support Staff, Media	171	4.8	113	144	257
Administration	180	7.0	48	30	78
TOTAL	2,219	5.4	1,471	1,602	3,073

* No previous Connecticut public school teaching experience

Source: Connecticut Department of Education

Supply and Demand

Connecticut is a leader in the assessment of the supply and demand for teachers. The state's model for the prediction of the demand for teachers by subject area, and its study of the supply market, have received national recognition. Yet, recent initiatives to increase salaries, test teachers prior to certification and open an alternate route to the teaching profession have made previous supply studies obsolete. The challenge for the future will be to assess the impact of each of the initiatives on the ability of the state to attract sufficient numbers of high-quality people into the teaching profession.

The annual need for new teachers depends upon teacher turnover (the number of teachers who leave teaching either temporarily or permanently), the change in the number of positions in response to changes in enrollment, and the addition of new positions in response to new programs.

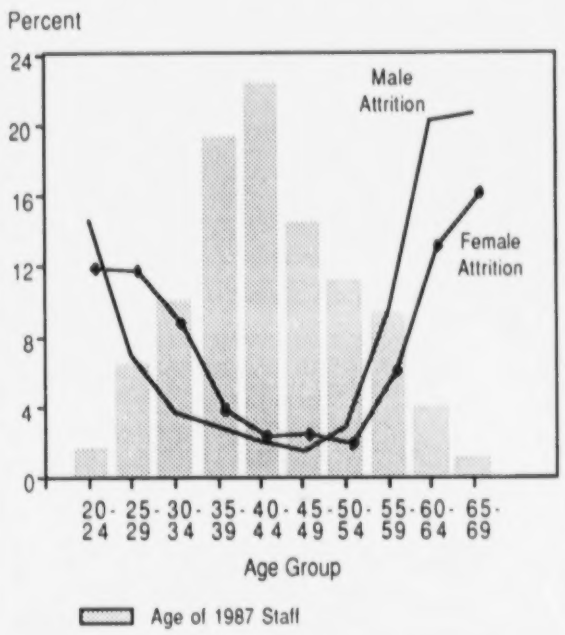
Between 1986 and 1987, the turnover in full-time and part-time positions in the public schools was 2,219 professionals, or 5.4 percent of the 1986 staff. Special education had the highest turnover (7.6%) and the category that includes mathematics, chemistry, physics and computer education teachers had the lowest (4.0%). These rates are significantly lower than those reported in 1985, when the overall turnover rate was 6.4 percent. The salary increases for veteran teachers made possible by the Education Enhancement Act are thought to be responsible for the lower turnover.

In 1987, 3,073 positions were filled by people not employed in the public schools at the beginning of the prior school year. For the first time in several years, returning experienced teachers filled fewer than half (47.9%) of the available positions. The remaining 1,602 positions were filled by people classified as inexperienced, although many of these individuals have taught

in private schools or out of state. In Connecticut, "experience" is reported as in-state public school teaching experience. A recent study found that only 19.4 percent of the teachers hired in September 1986 had no prior teaching experience.

Attrition, which includes retirement, is the key component in Connecticut in projecting future demand. Other factors include the need for new staff to meet enrollment increases and program initiatives such as extended-day kindergarten. From 1986 through 1988, the teacher-pupil ratio grant of the Education Enhancement Act provided funds to districts with poor staffing ratios to hire 704.4 additional staff.

Attrition Rate 1987-88 and Age of 1987 Professional Staff



Source: Connecticut Department of Education

Attrition varies by age, gender and subject area. The graph above shows high attrition among the young, when people are likely to change careers, move, get married or start a family. Midcareer attrition is very low, about 2 to 3 percent annually, and then it picks up as veteran teachers approach retirement age. Compared to men, attrition rates for women are higher at the younger ages and lower at the older ages.

By juxtaposing the age of the staff in 1986 with the graph of attrition, we can see why Connecticut currently enjoys low attrition with an "aging" staff. In the past ten years the average age has increased from 38.4 to 42.9 years. This has been due in part to the reduced hiring of many new inexperienced staff — those who tend to have higher attrition rates than people in the 35 to 50 age group. Thus our staff has "aged" into those midcareer years when very few people leave. Soon we should see another aspect of an aging staff — a moderate increase in the number of retirees (see table below).

Integrating attrition, policy initiatives and hiring preferences into a model indicates an expected need to fill approximately 3,000 positions annually through the end of this century. The table below breaks down this need for eight subject areas. Note the increased need expected for secondary school teachers in all areas, as enrollment starts to increase.

Projected Retirees from Professional Staff

	Year		
Subject Area	1990	1995	2000
Elementary	260	283	327
Mathematics, Chemistry, Physics, Computer Ed.	49	54	70
Required Secondary	118	130	159
Elective Secondary	109	109	118
Art, Music, Physical Ed.	58	63	76
Special Education	40	54	72
Support Staff, Media	97	98	120
Administration	112	119	130
TOTAL	843	910	1,072

Source: Connecticut Department of Education

The supply of teachers is much broader than the number of graduates from education programs in Connecticut. It also includes graduates with subject area majors with minors in education, out-of-state graduates, experienced teachers from Connecticut who have interrupted their careers, and experienced teachers who have moved to Connecticut. There is no one supply

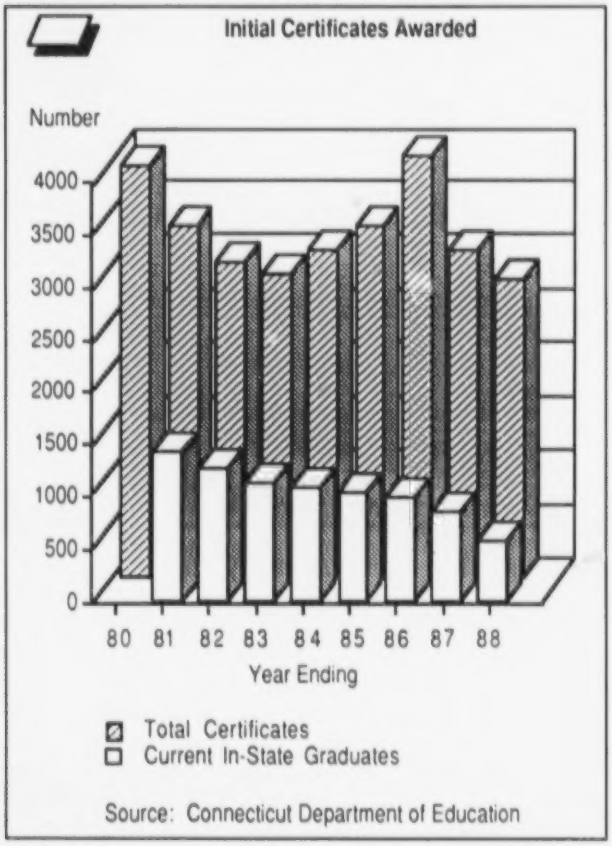
Projected Demand for Professional Staff

	Year		
Subject Area	1990	1995	2000
Elementary	960	867	700
Mathematics, Chemistry, Physics, Computer Ed.	140	187	199
Required Secondary	345	460	483
Elective Secondary	307	380	375
Art, Music, Physical Ed.	259	254	243
Special Education	501	456	429
Support Staff, Media	238	229	232
Administration	188	194	199
TOTAL	2,938	3,027	2,860

Source: Connecticut Department of Education

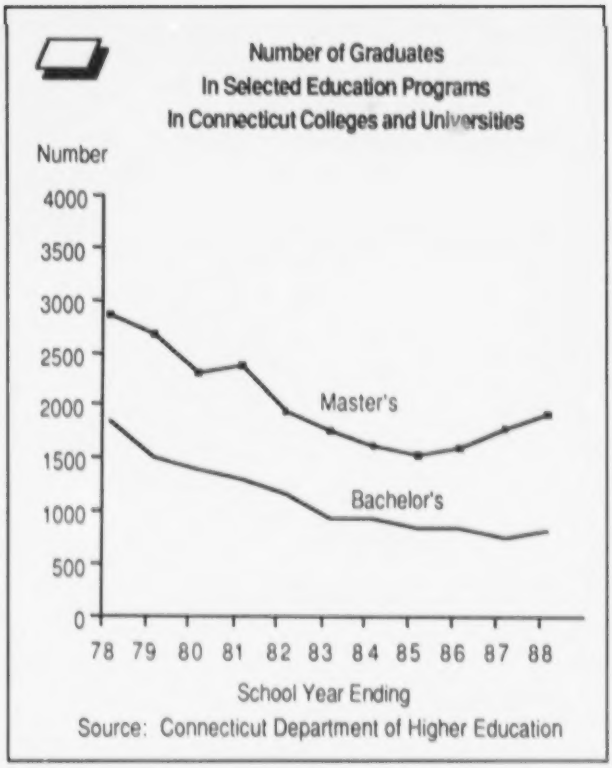
index that measures the availability of this broad group of teachers. The key index of supply that we have chosen is the number of first Connecticut certificates awarded annually.

In the eight years that the State Department of Education has tracked the number of first certificates awarded, the total ranged from 3,984 in 1985-86 to 2,840 in 1987-88. The influx in the number certified in 1985-86 and the subsequent decline is thought to be related to the implementation of the CONNCEPT program in May 1986. Although the number certified may be fewer than before, the number of qualified people actively seeking teaching positions is believed to have changed little.



The number of initial certificates issued to current graduates of Connecticut institutions has dropped steadily. In 1980-81 Connecticut colleges and universities supplied 1,409 candidates for initial certificates. In 1987-88, the number was 571. Current Connecticut graduates include students receiving their bachelor's degrees in education, students not previously certified who earned master's degrees in education, and those majoring in subject areas with a minor in education.

The number of students earning bachelor's degrees in education from Connecticut's colleges and universities continued to decline, but the number earning master's degrees increased significantly. In 1987-88 the number of bachelor's degrees in education was 724; ten years ago the figure was 1,764. Ten years ago 12.9 percent of all bachelor's degrees were awarded in education; in 1987-88 the percentage was 5.2. The



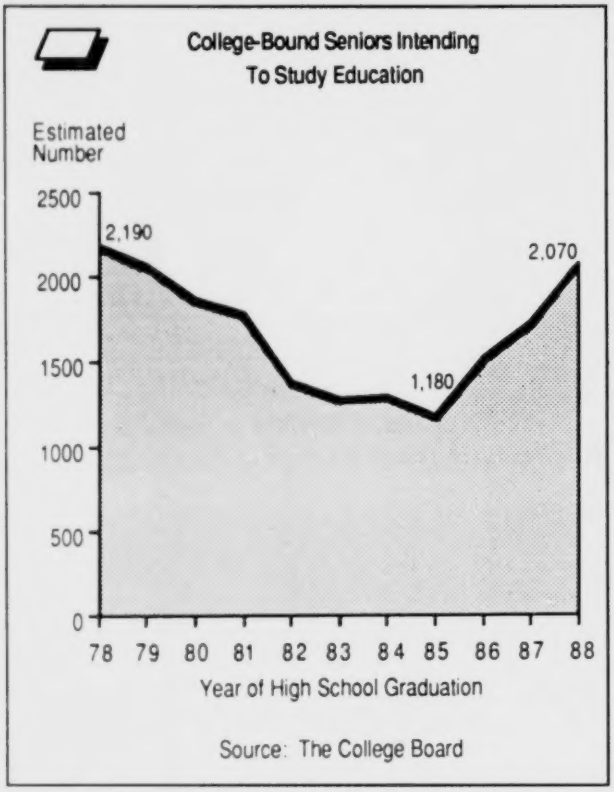
1,935 master's degrees awarded in 1987-88 was up 381 from the 1984-85 low, but is still well below the 2,869 awarded ten years ago.

The sharp decline should not cause great alarm. Ten years ago the supply of teachers far surpassed the demand. Much of the decline has brought supply and demand into better balance. There are indications from reports of the Connecticut State University System that more students are studying education now than a few years ago.

The number and percentage of college-bound students (those who take the Scholastic Aptitude Test) indicating their intention to prepare for a career in education also increased significantly for three consecutive years. In 1987-88, an estimated 2,070 high school seniors (345 more than the prior year) indicated an intent to study education. This represents about one in 15 members of the class of 1988. The intent to study education nearly equals the level of ten years ago, when about one in 14 seniors (a total of 2,190) chose this area of study.

The supply of those first certified appears to be sufficient to meet current demand, although shortages in some subject areas and some parts of the state are to be anticipated. Slightly more than one in four (26.6%) of those certified in the year prior to September 1, 1987, had a certified position in the Connecticut public schools in September. The percentage employed within one year of certification has ranged from 21.6 percent in 1981-82 to 30.1 percent in 1984-85.

When the clinical assessment and subject area testing components of Connecticut's program to assess prospective teachers become operational, we will have better indicators of the qualifications of new classroom teachers. Until then we have



only the SAT scores of those intending to study education and the initial results from CONNCEPT as indicators.

The combined verbal and mathematical SAT scores of college-bound students intending to study education declined one point to 851 in 1987-88 after increasing by 49 points between 1981-82 and 1986-87. Although the scores of those intending to study education have improved by 48 points since 1981-82, they still lag 57 points behind the state average of all college-bound students. This difference has been as great as 94 points (1982-83).

Percent of Those First Certified Who Are Hired

Year September 1 to August 31	Number of Initial Certificates	Employed September 1 Number	Percent
1986-87	3,116	829	26.6
1985-86	3,842	950	24.7
1984-85	3,346	1,006	30.1
1983-84	3,117	826	26.5
1982-83	2,875	651	22.6
1981-82	3,001	649	21.6

Source: Connecticut Department of Education

An analysis of the SAT scores of students who took CONNCEPT in 1985-86 and 1986-87 verified that college students seeking admission to a teacher preparation program in Connecticut do indeed have low SAT scores. In those two years about 24 percent of those participating in the CONNCEPT program had a combined SAT score below 800. The 1987-88 results indicate a more upbeat picture: 43.4 percent of those taking CONNCEPT for state certification to become a teacher or admission to the state's teacher preparation programs had combined SAT scores of more than 1000. The median SAT score was an estimated 972. With a majority of those with low combined SAT scores failing CONNCEPT and thus being denied certification, the SAT scores of those who eventually enter the classroom are sure to be well above the current scores of college-bound seniors (908).

Combined SAT Scores of Those Intending to Study Education

Year	Education	State Average
1987-88	851	908
1986-87	852	912
1985-86	840	914
1984-85	828	915
1983-84	817	904
1982-83	804	898
1981-82	803	896
1980-81	814	893
1979-80	810	897
1978-79	824	900
1977-78	825	907

Source: Connecticut Department of Education

Connecticut has taken significant steps to address the problem of a perceived or real decline in the quality of teachers and the decline in the number of students interested in teaching. The comprehensive program of teacher testing will ensure that every new teacher has knowledge not only of basic skills, but also of his or her subject area, plus demonstrated pedagogical skills in a clinical assessment. Increased salaries and greater professionalism should attract more students into teaching.

Student Achievements

Achievement test scores are an important indicator of student success—and, in turn, a measure of the extent to which the public schools are achieving the goal of educational equity and excellence. The scores help to answer five questions:

- How well are Connecticut students achieving the established educational objectives?
- How many students need remedial assistance?
- How do the accomplishments of today's students compare with those of students in previous years?
- How do Connecticut students compare to students nationally?
- What are the patterns of student performance by race, gender and type of community?

Connecticut has developed a balanced testing program that provides answers to all five questions. The Connecticut Mastery Test (CMT) program, initiated in the fall of 1985, is designed to monitor the achievement of all students at Grades 4, 6 and 8 on the essential skills of language arts (including reading and writing) and mathematics. In addition, the Connecticut Assessment of Educational Progress (CAEP) testing program monitors the progress of a statewide sample of students in their acquisition of knowledge in specific subject areas and their ability to apply that knowledge.

Connecticut also compares the progress of its students against national test data. In order to determine how well the average student in Connecticut performs compared to a national sample of students, the Connecticut Mastery Test was statistically linked to items on a nationally norm-referenced test. The CAEP program incorporates items that have been administered to a national sample of students, and The College Board reports regularly on the Scholastic Aptitude Test (SAT) performance of Connecticut students in comparison with their national counterparts.

In addition to test scores, Connecticut monitors the progress of its students on other performance indicators. These include patterns of courses taken, high school graduation rates, the activities of students after they leave school, and the achievements of adult learners. In order to monitor progress in achieving equity, much of the data is collected and analyzed by race, gender and type of community. This chapter describes the achievements of Connecticut students on a number of indicators.

Connecticut Mastery Test (basic skills achievement)

The Connecticut Mastery Test (CMT) program was initiated in the fall of 1985, when the 4th grade test was administered for the first time, followed in fall 1986 by mastery testing of 4th, 6th and 8th grade students. The purpose of CMT is to measure learning outcomes that most students can reasonably be expected to master by the end of Grades 3, 5 and 7.

Mastery tests offer several features:

- early identification of students needing remedial assistance;
- testing of a comprehensive range of academic skills;
- high standards for student achievement;
- useful information about students, schools and districts; and
- monitoring of student progress over time.

The mastery tests are criterion-referenced to help determine the specific level of skills possessed by students. The skills and objectives on which students are tested at various grade levels were identified by educators statewide as appropriate and reasonable for students at each of the grades tested. The goal is for each student to achieve mastery of all objectives.

Mathematics statewide results. In mathematics, results at all three grade levels show a clear pattern of student strength in the areas of whole number computation, addition, subtraction, multiplication, division, using time and money, and reading tables and graphs. However, the test results also document student weaknesses, specifically in conceptual understandings and applications, particularly in the areas of fractions, estimation

Connecticut Mastery Test
Statewide Results in Grades 4, 6 and 8

MATHEMATICS

	Average Number of Objectives Mastered			Percent of Students Above Remedial Standard		
Year	Grade 4	Grade 6	Grade 8	Grade 4	Grade 6	Grade 8
1987	20.4	23.7	25.0	86	82	85
1986	20.1	23.1	23.7	84	81	83
1985	19.3	—	—	80	—	—
	Number of Objectives			Remedial Standard		
	25	36	36	69 items correct of 100	79 items correct of 144	78 items correct of 144

Source: Connecticut Department of Education

and measurement. Overall, the average number of objectives mastered and the percent of students above the remedial standard rose with each test administration from 1985 through 1987.

Connecticut Mastery Test
Statewide Results in Grades 4, 6 and 8

READING

	Average Degrees of Reading Power			Percent of Students Above Remedial Standard		
Year	Grade 4	Grade 6	Grade 8	Grade 4	Grade 6	Grade 8
1987	45	56	62	75	73	77
1986	44	55	61	72	69	73
1985	43	—	—	68	—	—
	Reading Goal			Remedial Standard		
	50 DRP Units	56 DRP Units	62 DRP Units	41 DRP Units with 70% comprehension	50 DRP Units with 75% comprehension	55 DRP Units with 80% comprehension

Source: Connecticut Department of Education

Language Arts statewide results. The language arts test consists of two reading tests, a writing composition test and a test of writing mechanics and study skills. Results of the Degrees of Reading Power Test (DRP), a holistic measure of reading comprehension, show that Grade 4 students are making progress toward the statewide reading goal. Close to three-quarters of all Connecticut students tested in Grades 4, 6 and 8 are reading at or above the remedial standards for these grades.

Reading is also measured by assessing students' ability to literally comprehend written prose, and to make inferences and evaluative judgments. Generally, students exhibited gains at the literal, inferential and evaluative levels in listening and reading comprehension, when 1987 results are compared to 1986 results. This trend is also true for language arts objectives such as writing mechanics (e.g., capitalization, punctuation, spelling) and study skills (e.g., use of dictionary, table of contents, maps, charts).

Writing has been a persistent problem in Connecticut and around the country, but the 1987 mastery test results do show

Connecticut Mastery Test
Statewide Results in Grades 4, 6 and 8

LANGUAGE ARTS

	Average Number of Objectives Mastered		
Year	Grade 4	Grade 6	Grade 8
1987	6.2	8.0	7.7
1986	6.1	7.5	7.5
1985	6.1	—	—
	Objectives		
	9	11	11

Source: Connecticut Department of Education

improvement. However, the process of producing good written essays beyond a minimally proficient level proves more difficult for students. Although a significant number of students continue to have difficulty with the writing process, there were gains in writing in 1987. Overall, the increase in scores appears promising, though incremental.

Connecticut Mastery Test
Statewide Results in Grades 4, 6 and 8

WRITING

	Average Holistic Score			Percent of Students Above Remedial Standard		
Year	Grade 4	Grade 6	Grade 8	Grade 4	Grade 6	Grade 8
1987	5.1	4.9	5.2	83	81	88
1986	4.6	4.7	5.0	77	78	83
1985	4.8	—	—	81	—	—
	Prompt Type			Remedial Standard		
	Narrative	Expository	Persuasive	4	4	4

Source: Connecticut Department of Education

Student growth on CMT over time. Since students who took the fourth grade test in 1985 subsequently took the sixth grade test in 1987, change in performance on the CMT can be assessed across two years' time for this group. However, growth across time cannot be measured simply by comparing average raw scores on the two tests, since the Grade 4 and Grade 6 tests differ with respect to content, difficulty and length. Instead, the different levels of the tests must be converted to a common scale (known as a vertical scale) which allows performance to be compared across grades.

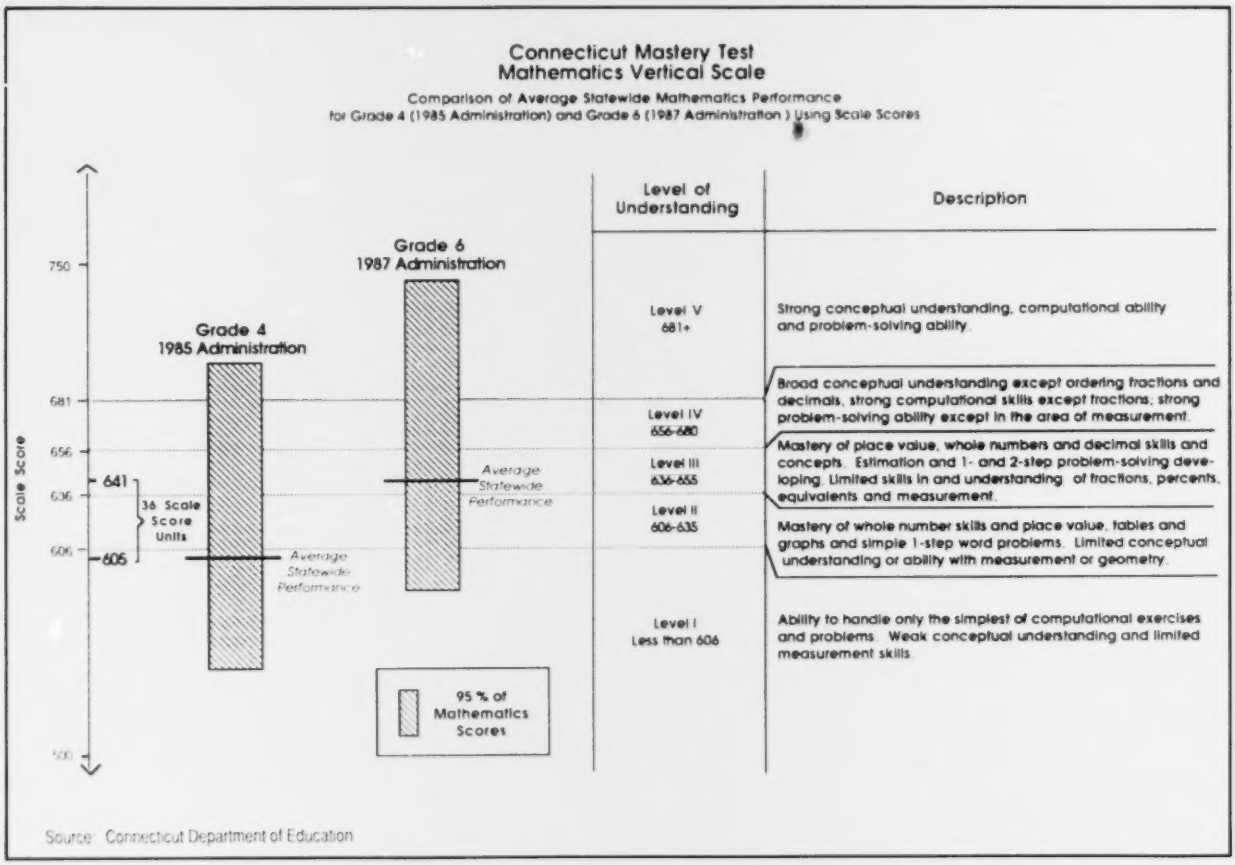
A vertical scale was created for this purpose in both mathematics and reading comprehension. The mathematics scale includes five levels, with Level I representing the most basic level of mathematics skill and Level V representing the highest. The reading comprehension scale includes four levels, with Level I again representing the lowest ability level and Level IV the highest. The writing and language arts tests could not be scaled because of the scoring methods used for these tests.

The vertical scales show that group performance increased markedly in both mathematics (+36 scale score points) and reading comprehension (+30 scale score points) from 1985 to 1987. With test results from future CMT administrations, the growth of other groups of students can be monitored as they progress through the grades.

Performance on the CMT can be placed in a national perspective since the CMT is linked to the newest edition of the Metropolitan Achievement Test (MAT-6), which was normed in 1986. Through this link, norms were developed for the mathematics, language arts and reading comprehension tests. The Degrees of Reading Power (DRP) test, which is marketed by the College Board, is nationally normed. No norms could be created for the writing test because of how this test is scored.

Norms are expressed in percentile ranks ranging from 1 to 99. A national percentile rank (NPR) of 50 is equivalent to being "at the national average" and is interpreted as grade level performance. When examining Connecticut group performance, an NPR of 50 means that the average Connecticut student performed as well as or better than 50 percent of the students in the national sample.

In every grade and content area, the national percentile ranking of the average Connecticut student substantially exceeded the national average (50th percentile rank). In fact, the average Connecticut student ranks in the upper third of the nation's students in three of the four areas considered. The norms for mathematics and language arts are similar across all three grades, ranging from 65 to 69. Reading comprehension norms are slightly lower, but are also similar across all grades, ranging from 57 to 60.


Connecticut Mastery Test
Mathematics Vertical Scale
Comparison of Average Statewide Mathematics Performance
for Grade 4 (1985 Administration) and Grade 6 (1987 Administration) Using Scale Scores
Level of Understanding
Description
Grade 6
1987 Administration
Grade 4
1985 Administration
Scale Score
750
681
656
641
636
606
605
500
36 Scale Score Units
Average Statewide Performance
Average Statewide Performance
95 % of Mathematics Scores
Level V
681+
Strong conceptual understanding, computational ability and problem-solving ability.
Level IV
656-680
Broad conceptual understanding except ordering fractions and decimals, strong computational skills except fractions; strong problem-solving ability except in the area of measurement.
Level III
636-655
Mastery of place value, whole numbers and decimal skills and concepts. Estimation and 1- and 2-step problem-solving developing. Limited skills in and understanding of fractions, percents, equivalents and measurement.
Level II
606-635
Mastery of whole number skills and place value, tables and graphs and simple 1-step word problems. Limited conceptual understanding or ability with measurement or geometry.
Level I
Less than 606
Ability to handle only the simplest of computational exercises and problems. Weak conceptual understanding and limited measurement skills.

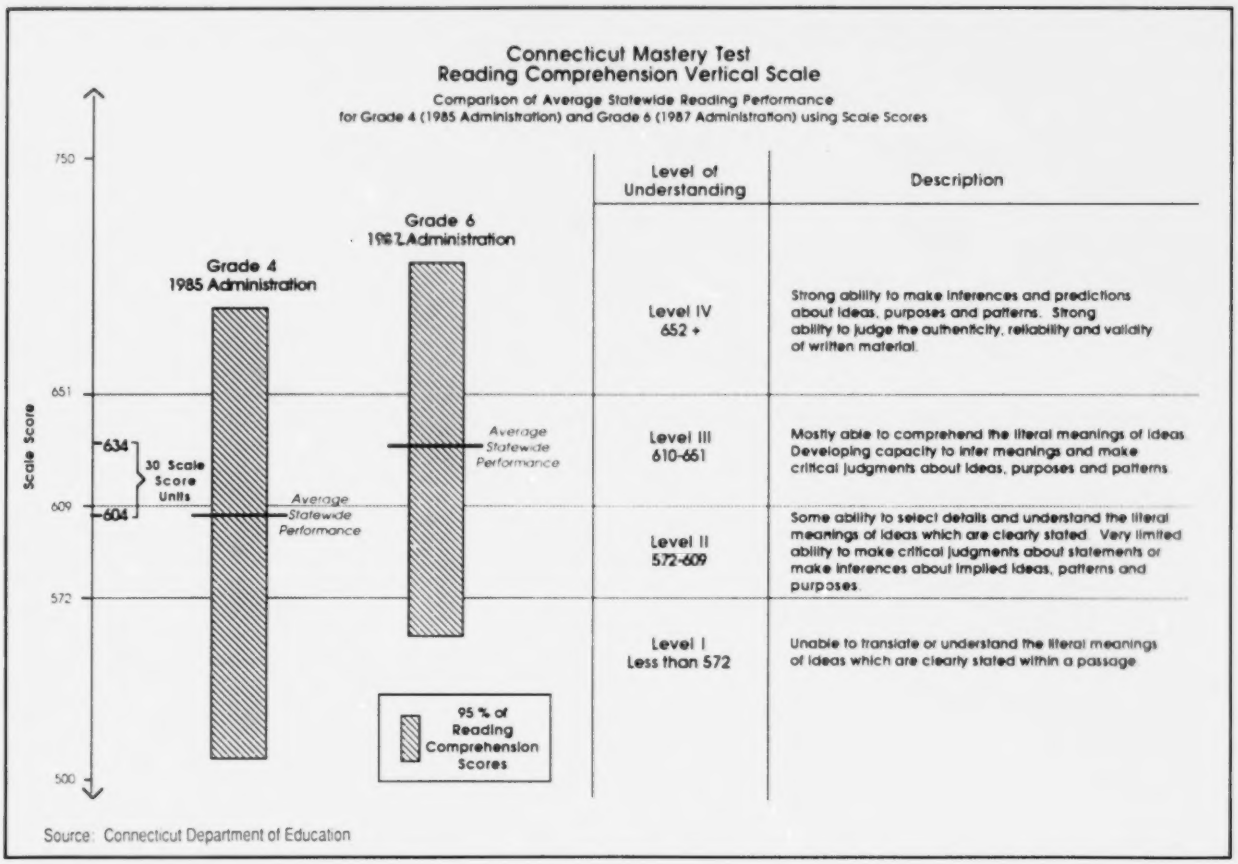
Source: Connecticut Department of Education

Degrees of Reading Power norms (ranging from 67 to 74) are considerably higher than the reading comprehension norms, because the DRP is based on 1981 norms instead of the 1986 norms used for the MAT-6. The College Board is in the process of re-norming the DRP, and the DRP norms will be adjusted when this information becomes available.

Relationships between student characteristics and achievement. Pursuant to the State Board of Education's directive to monitor equal educational opportunities within the state, the State Department of Education has begun an investigation of factors affecting the level of educational achievement of Connecticut's students. Analysis focused on the extent to which the results of the 1987 Connecticut Mastery Test varied by gender, race, dominant language and economic status (based on participation in the free or reduced-price lunch program). The purpose of focusing directly on these issues is to identify the areas of greatest need and the factors of greatest significance in educational achievement, so that the Department's programs can be channeled more effectively.

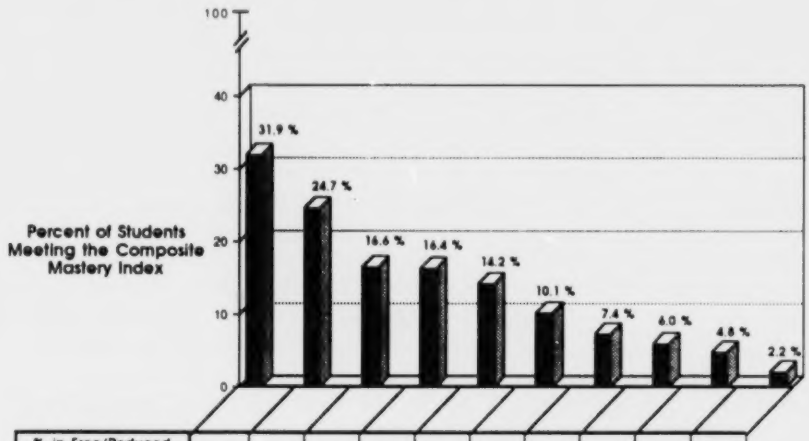
Mastery Test achievement indicators. Two aggregate indicators—the Composite Remedial Index and the Composite Mastery Index—were developed for this study and used to assess and compare student achievement. The Composite Remedial Index is the percentage of students scoring above the statewide remedial index in each of three content areas (mathematics, reading and writing). The Composite Mastery Index is the percentage of students scoring above a more demanding index on each of four content areas (mathematics, reading, writing, language arts). This latter index was developed in order to set up a more rigorous benchmark for performance comparison, indicative of excellence or a high level of mastery, rather than relying exclusively on a remedial or minimum benchmark.

Relationship between student characteristics and achievement: results. This analysis of fourth, sixth and eighth grade performance on the 1987 Connecticut Mastery Test has revealed that the mastery test performance of black and Hispanic students was substantially below that of whites; the performance of students in large cities was substantially below that of students throughout the balance of the state; and students who were in the free/reduced-price lunch program had substantially lower mastery test scores than nonparticipants. Several detailed analyses suggested that economic status was the primary factor underlying these results. Additional analyses showed a dramatic drop in test scores as the concentrations of the factors of economic need and racial isolation increased. These analyses are fully detailed in the State Board of Education report titled "Report on Three Perspectives on the Educational Achievement of Connecticut Students" (September 1988).


Connecticut Mastery Test
Reading Comprehension Vertical Scale
Comparison of Average Statewide Reading Performance
for Grade 4 (1985 Administration) and Grade 6 (1987 Administration) using Scale Scores
Scale Score
750
651
609
572
500
634
604
30 Scale Score Units
Grade 4
1985 Administration
Grade 6
1987 Administration
Average Statewide Performance
Average Statewide Performance
95 % of Reading Comprehension Scores
Level of Understanding
Description
Level IV
652 +
Strong ability to make inferences and predictions about ideas, purposes and patterns. Strong ability to judge the authenticity, reliability and validity of written material.
Level III
610-651
Mostly able to comprehend the literal meanings of ideas. Developing capacity to infer meanings and make critical judgments about ideas, purposes and patterns.
Level II
572-609
Some ability to select details and understand the literal meanings of ideas which are clearly stated. Very limited ability to make critical judgments about statements or make inferences about implied ideas, patterns and purposes.
Level I
Less than 572
Unable to translate or understand the literal meanings of ideas which are clearly stated within a passage.
Source: Connecticut Department of Education

Connecticut Mastery Test

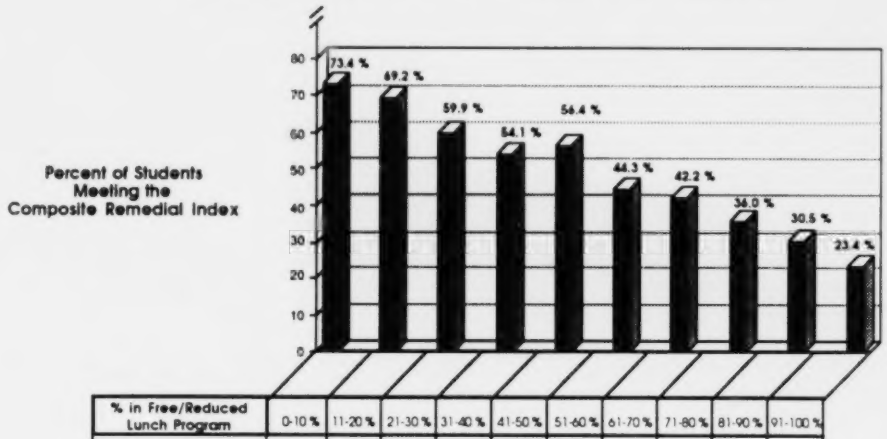
Grade 4 Student Achievement (Composite Mastery Index) by Economic Status (Free/Reduced Lunch Program) and Racial Composition of Connecticut Schools



% in Free/Reduced Lunch Program	0-10 %	11-20 %	21-30 %	31-40 %	41-50 %	51-60 %	61-70 %	71-80 %	81-90 %	91-100 %
% Minority Students	11.9 %	11.8 %	20.1 %	33.3 %	36.1 %	48.7 %	71.1 %	80.8 %	87.5 %	95.9 %
Number of Schools	284	66	40	31	21	12	10	13	14	14

Percent of Students by School

Grade 4 Student Achievement (Composite Remedial Index) by Economic Status (Free/Reduced Lunch Program) and Racial Composition of Connecticut Schools



% in Free/Reduced Lunch Program	0-10 %	11-20 %	21-30 %	31-40 %	41-50 %	51-60 %	61-70 %	71-80 %	81-90 %	91-100 %
% Minority Students	11.9 %	11.8 %	20.1 %	33.3 %	36.1 %	48.7 %	71.1 %	80.8 %	87.5 %	95.9 %
Number of Schools	284	66	40	31	21	12	10	13	14	14

Percent of Students by School

Source: Connecticut Department of Education

Relationship of Equal Educational Opportunity Factors and Student Achievement—1987 Grade 4 Mastery Test

Category	Number of Students Tested	Percent of Students Tested	Percent Meeting Composite Remedial Index	Percent Meeting Composite Mastery Index
All Students	30,385	100.0	66.1	25.9
GENDER				
Male	15,152	49.9	63.1	22.1
Female	15,230	50.1	69.0	29.7
RACE				
White	22,302	77.8	73.9	30.9
Black	3,345	12.4	36.0	5.8
Hispanic	2,177	7.6	31.7	4.9
Other	638	2.2	67.9	28.7
DOMINANT LANGUAGE				
English	26,743	94.6	68.0	27.0
Spanish	1,036	3.7	23.8	3.1
Other	504	1.8	53.4	15.9
ECONOMIC STATUS (Free/Reduced Lunch Program)				
Nonpartici-pants	23,233	82.6	71.3	29.3
Participants	4,901	17.4	39.7	7.3

Source: Connecticut Department of Education

Connecticut Assessment of Educational Progress (subject area achievement)

By monitoring changes in student performance over time, the Connecticut Assessment of Educational Progress (CAEP) has identified strengths and weaknesses in curriculum areas since 1971.

Since most CAEP tests include some items from the National Assessment of Educational Progress (NAEP), it is possible to compare the performance of Connecticut's students with their peers around the country. In the 14 assessments conducted between 1971 and 1985, Connecticut's 4th, 8th and 11th grade students outperformed students nationwide in 33 of 41 comparisons.

Although CAEP results are reported only on a statewide, aggregate basis, local districts may choose to test a sample of their students and obtain results directly from the private vendor responsible for grading the test. Districts then use these results in planning and evaluating their instructional programs.

As the CAEP program has evolved, two features have been added: performance testing (i.e., observations of student behavior/performance and/or ratings of student products) and the assessment of higher-order thinking skills.

CAEP performance testing began in 1980-81 with the art and music assessment in which a small sample of students was asked to draw and sing. Since then, performance tasks have been built into each new assessment, requiring students to demonstrate "knowledge-in-use" rather than to simply select multiple choice options. These performance tests have demonstrated the need to include more such activities in the classroom. In the 1983-84 Business and Office Education test on accounting, for example, performance was significantly higher on the multiple-choice test items than on the journal exercises. The same was true for the general office students, who performed better on the multiple-choice test than on the typing test, thus demonstrating the need for more practice in both speed and accuracy. In the areas of science and English, students have written essays, taken notes from a taped lecture, and conducted experiments.

Two new CAEP assessments administered in the spring of 1987 also place strong emphasis on performance. Foreign language tests in French, German, Italian and Spanish included speaking and writing sections in addition to the reading, listening and culture sections. In general, students in all languages do better on items which test literal comprehension skills than on those which require students to make inferences, draw conclusions or evaluate data. In the vocational education areas of drafting, graphic arts and small engines, practical tests such as repairing engines and making drawings were administered to a

Connecticut Assessment of Educational Progress Curriculum Areas Assessed

Art and Music	1980-81
Business and Office Education	1983-84
Career Education	1977-78; 1981-82
Citizenship/Social Studies	1977-78; 1982-83
Drafting, Graphic Arts and Small Engines	1986-87
Foreign Language	1986-87
Mathematics	1976-77; 1979-80
Reading/English Language Arts	1971-72; 1975-76; 1978-79; 1983-84
Science	1974-75; 1979-80; 1984-85

Source: Connecticut Department of Education

subset of students. Students in the comprehensive high schools and vocational-technical schools were tested in drafting, graphic arts and small engines in April 1987. Across five performance tasks in drafting, an average of 71.6 percent of students at comprehensive high schools and 74.2 percent of vocational-technical school students met standards of performance expected of an entry-level employee. On 12 performance jobs in graphic arts, an average of 93.7 percent of students at comprehensive high schools and 93.5 percent of vocational-technical school students met the performance standards. No results were reported for performance tasks in small engine repair because too few students were tested in this subject area.

A second characteristic of the new CAEP assessments is the inclusion of items that test higher-order thinking skills. One common finding of both the mastery test program and recent CAEP assessments is the general weakness of students in this area. These weaknesses are summarized in the table below.

National Testing of College-Bound Students

Each year The College Board provides the Connecticut results for three of its national testing programs: (1) the Preliminary Scholastic Aptitude Test/National Merit Scholarship Qualifying Test (PSAT/NMSQT); (2) the Scholastic Aptitude Test (SAT) and Achievement Tests; and (3) the Advanced Placement (AP) Tests. This information makes it possible to monitor the performance of public and nonpublic school students who are planning to attend college.

Preliminary Scholastic Aptitude Test and National Merit Scholarship Program. Many students who plan to attend college elect to take the Preliminary Scholastic Aptitude Test in the fall of their junior year in high school. The test is not

Synthesis of Findings on Higher-Order Thinking Skills in the Connecticut Assessment of Educational Progress Program 1982-1987*

Curriculum Area	Year	Findings
Social Studies	1982-83	• difficulty in recognizing associations such as cause and effect
		• difficulty in drawing conclusions from evidence and interpreting data displays
		• difficulty in solving problems
English Language Arts	1983-84	• difficulty in analysis and evaluation within the context of actual writing, reading and listening
		• difficulty in marshalling support and elaborating on points of view or positions
Science	1984-85	• difficulty in understanding science processes, such as distinguishing between observations and inferences
		• difficulty in designing multivariable experiments and drawing conclusions
		• misconceptions in measurement and concepts such as acceleration and conservation of energy
Foreign Language	1986-87	• students performed more poorly in the productive domains of speaking and writing than in the receptive domains of reading and listening

* The 1986 edition of *Meeting the Challenge: Condition of Education in Connecticut* provides a more in-depth discussion of higher-order thinking skills achievement.

Source: Connecticut Department of Education

only a helpful trial run for the SAT, it is also used by the National Merit Scholarship Corporation as the basis for determining scholarship semifinalists and letter of commendation recipients.

The PSAT, a somewhat shorter and easier version of the SAT, consists of verbal and mathematics sections with a scoring scale of 20 to 80. In 1987, Connecticut students had average scores that were slightly higher than those of their peers across the country but slightly lower than the 1986 state averages. Their average verbal score (42.1) was 1.7 points higher than the national average; the mathematics average (45.1) was 0.1 points higher.

Preliminary Scholastic Aptitude Test/National Merit Scholarship Qualifying Test (PSAT/NMSQT) Average Scores for College-Bound Juniors

Test Year	Expected Year of Graduation	Verbal		Mathematics	
		CT	Nation	CT	Nation
1987	1989	42.1	40.4	45.1	45.0
1986	1988	42.2	40.9	45.3	45.0
1985	1987	42.5	40.9	45.5	45.0
1984	1986	42.4	41.0	44.6	44.2
1983	1985	42.4	40.9	45.3	44.7
1982	1984	42.3	41.1	45.0	44.7
1981	1983	42.8	41.5	45.6	45.1
1980	1982	41.9	40.6	45.2	45.2
1979	1981	41.6	40.3	45.3	45.3
1978	1980	42.2	40.6	45.3	44.8

Source: The College Board

All students who take the PSAT are automatically considered for a scholarship award or recognition through the National Merit Scholarship Program. Awards are made two years later when the students enter college. The highest scoring students are designated semifinalists. Students with high scores, but below the semifinalists, receive letters of commendation. In the Merit Program year 1989 (based on PSATs taken in 1987), 200 students from 80 public and nonpublic schools in Connecticut were semifinalists, and 1,010 students from 160 of Connecticut's public and nonpublic schools were designated to receive letters of commendation. This represented 4.2 percent of those who took the PSAT in Connecticut, compared to 3.1 percent of the national test takers.

Scholastic Aptitude Test. According to The College Board, the SAT "is a measure of basic reasoning abilities in two areas: verbal and mathematical." Many college admissions officers use test results to supplement a student's high school record because the SAT has proved valid as a predictor of success in college.

National Merit Scholarship Program

Test Year	Merit Program Year	Number of Schools	Connecticut Commended Scholars	Percent Commended	
				CT	Nation
1987	1989	160	1,010	4.2	3.1
1986	1988	157	957	3.7	3.1
1985	1987	169	1,073	4.3	3.2
1984	1986	163	965	4.0	3.2
1983	1985	157	1,004	4.5	3.3
1982	1984	166	1,074	4.3	3.2
1981	1983	173	1,190	4.5	3.2
1980	1982	170	1,151	4.2	3.2
1979	1981	171	1,086	4.0	3.0

Source: National Merit Scholarship Corporation

Connecticut students dipped slightly on their SAT scores in 1987-88. The average verbal score was 436, down three points from 1986-87. The average mathematics score declined one point each year for three years, to 472 in 1987-88.

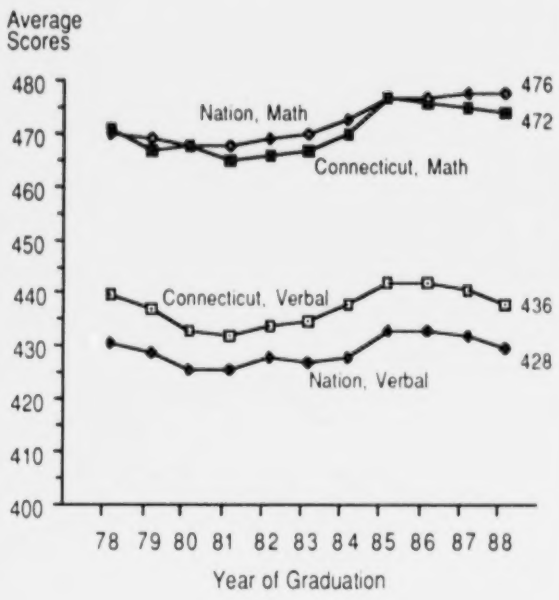
Connecticut has the rare combination of a high participation rate and high scores on the SAT. Connecticut's participation rate of 76.2 percent in 1988 was the highest participation rate ever recorded by any state. Nationally, 42 percent of all graduates took the SAT. In general, according to the College Board, the higher the participation rate, the lower the average state scores will be. This is not entirely true of Connecticut, however. In 1987-88, for example, Connecticut's verbal average was 8 points higher and the mathematics average was only 4 points lower than the national averages. Even this comparison is misleading, however, because the "national" average includes the scores of only a select few students in the 28 states where a comparable exam (such as ACT) is administered. (In Iowa, for example, 5 percent of the graduates take the SAT, but about 62 percent are college-bound.) When compared with the 21 states where a majority of college-bound students take the SAT, Connecticut's average verbal and mathematical SAT scores are 15 points and 4 points higher, respectively.

The percentage of Connecticut students scoring 600 or better on the verbal section dropped to 8.1 percent, lower than the previous year's ten-year high of 9.1 percent. The 17.1 percent scoring above 600 on the mathematics section was 1.1 percentage points below the previous year's level.

There continues to be a gap between the scores of males and females. On the SAT verbal, Connecticut males averaged 443 and females 431 in 1987-88. The difference between the male and female averages, also evident nationally, has ranged from 3 to 13 points in the past ten years. In 1987-88 the mean SAT mathematical score of Connecticut males was 492, and that of females was 454. This difference of 38 points was the smallest

ever recorded in the state. In the past ten years the gap has been as wide as 50 points (1981-82).

Average Scholastic Aptitude Test (SAT) Scores For College-Bound Seniors



Source: The College Board

The high participation rate on the SAT reflects the high standards and expectations held for all Connecticut students. Equity in access to higher education is a goal which is clearly stressed. This is reflected in the fact that the participation of minority students on the SAT rose 1.5 percentage points (from 11.7% to 13.2%) in one year (from 1986-87 to 1987-88). Even with this increase in participation, the gaps in combined SAT scores between white students and black and Hispanic students narrowed again in 1987-88 to the smallest differences ever. This three-year trend is a result of higher combined average scores for black and Hispanic students and a lower combined average score for white students. In 1987-88, a 19-point increase for Hispanic students and a one-point decrease for white students resulted in a difference in combined average scores of 164 points, the smallest ever recorded in the state. Black students' average score remained unchanged in 1987-88, but the one-point decrease for white students narrowed this gap slightly. The differences, however, are still significant: The average combined SAT score for white students in 1987-88 was 927, while the average score for black students was 725 and for Hispanic students, 763. At 933, the average combined score for Oriental students was six points higher than that for white students. In fact, except for two years (1984-85 and 1985-86), Oriental students have consistently outscored white students over the last decade.

Data such as this is important, because achievements of subgroups of students on the SAT constitute one of the benchmarks by which progress toward ensuring educational equity for all children will be measured.

SAT Scores by Gender

Year	Verbal Male	Verbal Female	Mathematical Male	Mathematical Female
1987-88	443	431	492	454
1986-87	442	435	496	452
1985-86	444	437	499	451
1984-85	444	436	499	454
1983-84	443	430	490	447
1982-83	437	429	489	443
1981-82	437	428	490	440
1980-81	436	424	488	439
1979-80	434	428	487	446
1978-79	437	434	488	443
1977-78	441	435	493	447

Source: The College Board

Test of Standard Written English. Since 1974-75 the SAT has included the Test of Standard Written English (TSWE), which evaluates, on a scale of 20 to 80, students' ability to recognize standard written English. It was developed to help colleges place students in freshman English courses. On this

Combined SAT Scores By Race

Year	Black	Oriental	Hispanic	White	TOTAL
1987-88	725	933	763	927	908
1986-87	725	930	744	928	912
1985-86	718	922	745	928	914
1984-85	715	928	750	934	915
1983-84	708	957	729	923	904
1982-83	698	936	721	918	897
1981-82	701	933	716	916	895
1980-81	680	942	717	910	892
1979-80	691	930	721	915	896
1978-79	684	944	706	916	900
1977-78	688	959	728	924	907

Source: The College Board

test, the average Connecticut score (43.5) has remained stable for two consecutive years and is only 0.2 points below the highest score of the decade (1977-78). In a similar trend, national scores have remained stable for two years but trail Connecticut by 0.5 points.

Female students continue to outperform males on this test, generally by a margin of 1.3 to 1.9 points. Results in Connecticut on this test over the past decade have remained relatively stable, varying by no more than 0.9 points for males and 1.1 points for females.

Test of Standard Written English
Average Scores of College-Bound Seniors
Scale: 20 to 80

	Males		Females		Total	
Year	CT	Nation	CT	Nation	CT	Nation
1987-88	42.7	42.3	44.2	43.7	43.5	43.0
1986-87	42.7	42.3	44.4	43.7	43.6	43.0
1985-86	42.1	41.9	43.6	43.2	42.8	42.6
1984-85	42.6	42.0	44.1	43.1	43.4	42.7
1983-84	42.5	41.9	44.1	43.3	43.3	42.6
1982-83	42.1	41.6	43.7	43.0	43.0	42.3
1981-82	41.8	41.7	43.1	42.8	42.5	42.3
1980-81	41.9	41.5	43.3	42.9	42.6	42.2
1979-80	42.3	41.7	43.7	43.0	43.0	42.4
1978-79	42.3	41.8	44.2	43.2	43.3	42.5
1977-78	42.8	42.0	44.6	43.5	43.7	42.8

Source: The College Board

Achievement Tests and Advanced Placement Tests. Unlike the verbal and mathematical sections of the SAT, which measure general aptitude, achievement tests measure how well a student performs in a subject area. The College Board notes that high scores on the achievement test "depend to a considerable extent on the opportunities offered in secondary school for learning the particular concepts and skills measured by the tests." In 1987-88, 10,427 of Connecticut's graduates (26 percent) took at least one Achievement Test, more than three times the national percentage (8 percent). As with the SAT, a higher participation rate generally means lower performance.

On a scale of 200 to 800, Connecticut students in 1988 averaged 532, up three points from the 1985-86 year. The average achievement test scores for students nationally was 543, one point lower than the 1987 mean but 16 points higher than 1973. Connecticut students took tests in history (American and European), computers (Pascal), English composition and literature, foreign languages (French, German, Hebrew, Latin, Spanish), two levels of mathematics, and the sciences (biology, chemistry and physics).

The College Board's Advanced Placement (AP) examinations give any high school student (not only those enrolled in advanced placement courses) an opportunity to demonstrate college-level achievement for which they may receive college credit or be exempted from required courses. In May 1988, 5,666 students from 172 public and nonpublic Connecticut schools took a total of 8,206 Advanced Placement examinations. A slight majority of the test takers, 55.8 percent, attended public schools.

Advanced Placement tests are scored on a scale from 1 to 5, with most colleges granting credit for a score of 3 or higher. In 1987-88, 73.5 percent of the 8,206 AP examinations taken by Connecticut students received a score of 3 or higher; this is a drop of 0.2 percentage points from 1986-87. Nationally, 67.2 percent of students scored at this level. The average scores of Connecticut public school students were higher than those of public school students nationally and of nonpublic school students in the state. While 71.6 percent of Connecticut's public school test takers earned scores of 3 or higher, the national average was 66 percent; 75.7 percent of the state's nonpublic school students taking the test achieved scores of 3 or better.

Advanced Placement Test Participants

	Schools		Students		Minorities		Public School Participation Rates	
Year	Total	Public	Total	Public	Total	Public	Seniors	Juniors
1987-88	172	118	5,666	3,163	554	266	6.0%	2.6%
1986-87	164	108	5,420	2,809	385	176	4.9%	2.3%
1985-86	163	105	4,851	2,529	369	159	5.0%	2.2%
1984-85	155	99	4,533	2,315	332	131	4.5%	1.9%
1983-84	155	99	4,220	2,134	305	113	4.3%	1.8%
1982-83	154	98	3,790	1,929	265	na	na	na
1981-82	143	na	3,604	na	na	na	na	na
1980-81	143	na	3,570	na	na	na	na	na
1979-80	139	na	3,111	na	na	na	na	na
1978-79	133	na	2,749	na	na	na	na	na

Source: The College Board

Advanced Placement Test Results

Year	Percent of tests scored 3 or better* All Students CT	All Students Nation	Public School Students CT	Public School Students Nation
1987-88	73.5	67.2	71.6	66.0
1986-87	73.7	67.6	74.2	66.4
1985-86	76.1	68.6	75.7	67.0
1984-85	74.8	67.1	75.4	65.7
1983-84	76.5	69.5	75.7	68.6
1982-83	76	70	na	na
1981-82	75	70	na	na
1980-81	76	71	na	na
1979-80	77	70	na	na
1978-79	77	71	na	na

* Test score scale is from 1 to 5.

Source: The College Board

High School Graduates

After peaking at 52,586 in 1978, the total number of high school diplomas awarded annually in Connecticut has experienced a fairly consistent decline (with a slight increase in 1987), primarily due to declining enrollments in the public schools. Much of the decline occurred between 1983 and 1986, when the total number of graduates dropped from 50,152 to 43,484.

High School Diplomas

Year of Graduation	Local Public	Vocational-Technical	Non-public	GED	Total
1987	31,129	2,282	6,005	4,523	43,939
1986	30,479	2,479	5,836	4,690	43,484
1985	31,880	2,634	5,914	4,068	44,496
1984	33,686	2,626	6,048	4,488	46,848
1983	36,204	2,503	6,229	5,216	50,152
1982	37,706	2,518	6,029	4,625	50,878
1981	38,577	2,410	6,021	3,984	50,992
1980	37,683	2,355	6,027	4,883	50,948
1979	39,727	2,206	6,186	4,310	52,429
1978	39,914	2,267	6,088	4,317	52,586
1977	40,393	2,233	6,049	3,877	52,552
1976	40,612	2,040	5,961	3,945	52,558
1975	40,479	1,838	5,915	3,662	51,894

Source: Connecticut Department of Education

During this same period, the total of nonpublic high school graduates increased (5,915 in 1975, 6,005 in 1987), while the number of vocational-technical graduates rose steadily through 1985, then fell slightly through 1987. The number of General Educational Development (GED) diplomas rose from 3,662 in 1975 to 5,216 in 1983, dropping back to 4,523 in 1987.

Graduation Rate. The high school graduation rate is an estimate of the percentage of ninth graders enrolled in public schools who are graduated four years later. The rate is calculated by dividing the number of graduates by the number of ninth grade students four years earlier. Graduation rates are used as an indicator of the "holding power" of high schools. This statistic, when aggregated statewide, provides a good indication of the overall number of students from each class who successfully complete high school in Connecticut. The graduation rate does, however, have a weakness: it provides no information about the progress of individual students through the system. It does not, for example, account for student migration, accelerated completion or mortality. The graduation rate simply describes the behavior of a cohort, namely each successive ninth grade class, but gives no information about individual members of the group.

Graduation Rate of Public School Students in Connecticut

Year of Graduation	Number of Graduates	Number of 9th Graders 4 Years Earlier	Percent Completing
1987	31,129	39,952	77.9
1986	30,479	39,484	77.2
1985	31,880	40,934	77.9
1984	33,686	43,322	77.8
1983	36,204	46,455	77.9
1982	37,706	49,706	75.9
1981	38,235	50,688	75.4
1980	37,683	50,447	74.7
1979	39,727	52,241	76.0
1978	39,914	51,510	77.5
1977	40,393	51,179	78.9

Source: Connecticut Department of Education

Consequently, little can be said about the turnover rate or the relative impact of such factors as transfers, retention and dropouts on the overall graduation rate of each class. Nevertheless, the graduation rate offers some very important insights.

The 1987 graduation rate of 77.9 percent for Connecticut's public high schools is essentially unchanged since 1983. Over the past decade, in fact, the rate has varied only moderately from a high of 78.9 percent in 1977 to a low of 74.7 percent in 1980.

In 1983, there were 39,952 students enrolled in the ninth grade in Connecticut public schools. In 1987, 31,129 students graduated from these high schools, resulting in a graduation rate of 77.9 percent for the class of 1987. When graduation rates are calculated for subgroups within this graduating class, there are

clear differences in the graduation rate by race, with the rate for black and Hispanic students significantly lower than that for white students. For example, in 1987, the graduation rate was 82.5 percent for white students, 61.1 percent for black students and 48.2 percent for Hispanic students. In fact, except for a slight decrease in 1986, the graduation rate for white students has steadily increased, while the graduation rate for minority students has fluctuated, but generally in a downward trend.

The 1987 graduation rate for the state's vocational-technical schools was 63.3 percent, down from 67.5 percent in 1986.

Graduation Rates of Public School Minority Students in Connecticut

Year of Graduation	Percent Graduating				
	Overall	White	Black	Hispanic	AI/AA
1987	77.9	82.5	61.1	48.2	98.9
1986	77.2	81.1	64.3	49.2	80.9
1985	77.9	82.5	61.7	46.2	83.0
1984	77.8	82.4	61.0	45.9	na
1983	77.9	81.2	62.9	50.8	na

Source: Connecticut Department of Education

As with local public school graduation rates, it cannot be assumed that students not graduating with their class have dropped out of school. Many vocational-technical students return to their local high schools to complete their education, accounting for part of the attrition of students from each class.

High School Equivalency Examinations, 1977-87

Year	Number of Tests Administered	Number of Tests Passed	Percent Passing
1987	6,711	4,523	67.4
1986	6,882	4,690	68.1
1985	6,482	4,068	62.7
1984	7,235	4,488	62.0
1983	7,636	5,216	68.3
1982	7,987	4,625	57.9
1981	6,588	3,984	60.5
1980	6,804	4,883	71.8
1979	7,230	4,310	59.6
1978	7,297	4,317	59.2
1977	7,772	3,877	49.9

Source: Connecticut Department of Education

High School Equivalency Examinations. In 1987, 4,523 adults passed either all parts of the General Educational Development (GED) test or, upon retaking the test, passed the parts failed previously, thus qualifying for a high school equivalency diploma. This represents 67.4 percent of the students taking the test, well exceeding the ten-year average of 63.7 percent. Of all those who took the GED test in 1987, 2,906 prepared for the test

Public High School Graduates Continuing Their Education

Year of Graduation	Total[1] Graduates	Total[2] Education		4-Year College		2-Year College		Vocational Program		Other Education	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1987	31,129	21,798	70.0	15,776	50.7	4,127	13.2	1,487	4.8	408	1.3
1985	31,880	21,252	66.7	14,598	45.8	4,317	13.5	1,854	5.8	483	1.5
1983	36,204	23,581	65.1	15,614	43.1	4,975	13.7	2,419	6.7	573	1.6
1981	38,577	24,199	62.7	16,338	42.4	4,706	12.2	2,565	6.6	590	1.5
1979	39,727	24,328	61.2	16,381	41.2	4,899	12.3	2,506	6.3	542	1.4
1977	40,393	24,240	60.0	15,892	39.3	5,245	12.9	2,803	6.9	300	0.7

1 Includes graduates from Norwich Free Academy, Gilbert School and Woodstock Academy; excludes vocational-technical school graduates.

2 The activity of approximately five percent of the students is unknown.

Note: Percentages are percent of total graduates.

Source: Connecticut Department of Education

in public school adult education courses; 78 percent of these students passed the test, up 1.8 percentage points from 1985.

Postsecondary education. An important indicator of educational outcome is the activities students pursue after they graduate from high school. Traditionally, a high percentage of Connecticut's high school graduates continue their formal education. Most high school graduates going on to higher education attend four-year colleges or universities (50.7% of all 1987 graduates), while a smaller percentage (13.2% of 1987 graduates) go to two-year colleges. The four-year college attendance figure is the highest ever recorded for Connecticut. An additional 4.8 percent of 1987 graduates are enrolled in vocational education programs. The dramatic increase in the percentage of local public high school graduates attending four-year colleges has kept the number of students at approximately the same level as ten years ago, despite a decline of more than 9,000 in the total number of graduates since 1977.

Notable disparities are seen between minority and nonminority students. In addition to having much lower graduation rates than their white counterparts, minority graduates are less likely to continue their formal education. In 1987, while 71.9 percent of white graduates went on to some form of postsecondary education, the percentage was 58.7 for minority graduates. It should be noted, however, that both percentages represent all-time highs.

Career-related activities. In 1987, 25.7 percent of public high school graduates sought to enter the work force immediately following graduation. Among minority students, 33.5 percent pursued career-related activities. Of the minority students who entered some type of career-related activity, 71.4 percent found employment, 20.9 percent entered the military and 7.8 percent were reported as unemployed. Of white students who graduated in 1987, 24.4 percent entered career-related activities as follows: 84.8 percent employed; 11.5 percent in the military; and 3.7 percent unemployed.

Public High School Graduates in Career-Related Activities

Year of Graduation	Total [1] Graduates	Seeking Careers [2] Number	Seeking Careers [2] Percent	Military Number	Military Percent	Employed Number	Employed Percent	Unemployed Number	Unemployed Percent
1987	31,129	8,012	25.7	1,066	13.3	6,584	82.2	362	4.5
1985	31,880	9,186	28.8	1,310	14.3	7,208	78.5	668	7.3
1983	36,204	10,785	29.8	1,548	14.4	7,979	74.9	1,258	11.7
1981	38,577	11,751	30.5	1,446	12.3	9,008	76.7	1,297	11.0
1979	39,727	13,040	32.8	1,406	10.8	10,383	79.6	1,251	9.6
1977	40,393	13,166	32.6	1,610	12.2	9,808	74.5	1,748	13.3
1975	40,479	13,241	32.7	1,463	11.0	9,820	74.2	1,958	14.8

1 Includes graduates from Norwich Free Academy, Gilbert School and Woodstock Academy; excludes vocational-technical school graduates.

2 The activity of approximately five percent of the students is unknown.

Note: Percentages are percent of those seeking careers.

Source: Connecticut Department of Education

Programs

To understand the full range of what is meant by educational programs, it is essential to examine the answers to three central questions:

- What is being taught?
- Who is teaching it?
- What resources are available to both the teacher and the student to help make the learning experience as successful as possible?

The teacher is the center of the educational universe. It is therefore critical that we ensure that only the best educators are teaching Connecticut's children. To do this, Connecticut has directed significant resources to enhance teacher salaries, redesign the certification system, provide testing of and support for student and beginning teachers, and require continuing professional development of experienced teachers. This chapter on programs begins, therefore, with a detailed discussion of Connecticut's commitment to the teaching profession.

Also included here are discussions of the following, which encompass the other questions noted above:

- Instructional programs, including early childhood initiatives, graduation requirements and the Common Core of Learning, vocational education and adult education;
- Support programs, including equity initiatives, special education, child nutrition, bilingual education, compensatory and migrant education; and
- Rehabilitation services for both youth and adults who require unique programs of training and support in order to learn or relearn skills essential to independence in work, family and community life.

The Connecticut Continuum: Connecticut's Commitment to the Teaching Profession

Connecticut has been addressing the pivotal role of teachers in education for almost a decade. Concerned about the ability of public schools to attract and retain quality teachers, Connecticut began to address improvements in teaching in 1980. In 1986, after years of activity conceptualizing and developing programs, the Education Enhancement Act was passed. Programs related to ensuring professional competence within four phases of a teacher's career—the decision to become a teacher, preparation, induction and continuing professional growth—were specified in the legislation.

Decision Initiatives

Salary Enhancement—The salary sections of the Education Enhancement Act provided state funds to increase Connecticut teacher salaries to among the highest in the nation. In 1987-88, the average salary of all Connecticut teachers was $34,170—16.1 percent more than before the act's implementation. The median starting salary increased 20.3 percent in the same period to $20,465.

Certification—The system has been redesigned to acknowledge the professional development stages of a teacher's career. The two-tier system of a provisional and standard teaching certificate has been replaced by a three-tier system with initial, provisional and professional educator certificates.

Alternate Route to Certification—Highly qualified individuals can become certified to teach through this program, after completing an intensive, special program and two years of closely supervised full-time teaching in a Connecticut public school. To be considered for admission to the program, individuals must present a strong subject matter background and the requisite liberal arts courses in addition to other evidence of potential for a successful teaching career. This program was offered for the first time in the summer of 1988 to 115 individuals. Approximately 80 were expected to begin teaching in the Connecticut public schools in the fall of 1988.

Preparation Initiatives

CONNCEPT—The Connecticut Competency Examination for Prospective Teachers (CONNCEPT) ensures that prospective teachers have essential skills in reading, writing and mathematics. Satisfactory completion of CONNCEPT is required for formal admittance to a Connecticut teacher preparation program. CONNCEPT is also a prerequisite for certification, regardless of where one has trained to be a teacher or prior teaching experience.

Teacher Preparation Programs—The state has revised and strengthened criteria for approving teacher education and preparation programs. This work was done in cooperation with the Board of Governors for Higher Education and Connecticut's colleges and universities.

Connecticut's Teaching Competencies—These establish a standard of competency and a common language of teaching for public school teachers. The competencies include 15 skills which a teacher must develop in order to earn a provisional educator certificate.

Academic Major—Connecticut has revised its requirements for prospective teachers. Graduates will need to major in the specific subject area they plan to teach or, for elementary teachers, in a specially designed interdisciplinary major, rather than in education.

CONNTENT— This examination, which ensures that prospective teachers have the content knowledge critical to their subject specialization, is a requirement for initial certification. The state is phasing in CONNTENT exams in 23 subject areas.

Cooperating Teacher Program—This program allows specially-trained, experienced teachers to assist student teachers in their first classroom experiences. Developing teachers receive support and feedback, while the veteran teachers undergo personal development by sharing knowledge and skills. Approximately 4,100 educators were trained in 1986-87 and 1987-88 to serve as cooperating teachers.

Initial Educator Certificate—This is granted to qualified individuals who have met the CONNCEPT and CONNTENT requirements. It is valid for one year, and may be renewed once under certain circumstances, as beginning teachers participate in a formal induction program.

Induction Initiatives

BEST—The Beginning Educator Support and Training (BEST) Program provides a combination of support and assessment for the beginning teacher. In this program, mentors serve as role models and guide beginning teachers as they develop the skills outlined in the Connecticut Teaching Competencies. In 1986-87 and 1987-88, approximately 4,100 teachers were trained to serve in this role. In addition, trained assessors (including teachers, administrators and other educators) conduct classroom observation assessments to verify that new teachers have achieved a level of competency warranting provisional certification. This program was piloted in approximately 60 districts in 1988-89.

Provisional Educator Certificate—This is granted to individuals who have successfully completed BEST. It is valid for eight years.

Career Initiatives

Professional Educator Certificate—This certificate is granted to teachers who have earned a provisional educator certificate and subsequently have completed at least three years of successful teaching and 30 hours of college-level study in accordance with regulations relative to the certificate. In order to maintain their professional educator certificates, teachers will have to complete nine continuing education units (CEUs) every five years (a total of 90 hours of professional development) beginning July 1, 1989.

Institute for Teaching and Learning—State-supported institutes, workshops and conferences sponsored by the Institute for Teaching and Learning give teachers and administrators the opportunity to develop new skills and knowledge at every developmental stage of their careers. The Institute will also help teachers to gain CEUs and to maintain their professional educator certificates at no cost to them.

Ongoing and systematic professional development is a major commitment of the State Board of Education. The centerpiece of this effort is the State Department of Education's Institute for Teaching and Learning, which began in the summer of 1984 with a budget of $500,000. Twenty-four courses in a variety of instructional areas were offered to 600 teachers.

The Institute has progressively increased its course offerings as funding for the program has grown. In 1987-88, the Institute was funded at $2.8 million and offered more than 150 courses to approximately 3,000 teachers.

At the same time, the Institute has expanded to include a series of conferences and workshops held throughout the year. During the 1985-86 school year, the Institute presented conferences and workshop programs which attracted 2,000 participants. By 1987-88, this aspect of the Institute offered conferences which attracted 4,000 teachers on the following topics: language arts, social studies, middle school mathematics, writing, physical education, professional development, substance abuse prevention, and early childhood.

A new and significant program of the Institute for Teaching and Learning, the Connecticut Principals' Academy, was initiated during the 1985-86 school year. The Academy provided a convocation, 14 workshops and four conferences aimed at improving skills of public school principals. Approximately 1,150 Connecticut administrators participated in these programs. In 1987-88, the Academy offered a statewide convocation, 7 workshops and 14 conferences attended by approximately 1,500 administrators in the state.

Professional Development Grants—There are numerous professional development activities at the local school district level. In 1985, each school district submitted a five-year professional development plan aimed at meeting the needs of its teachers and administrators. The Department annually grants $2.5 million to local school districts to help support the activities identified in the five-year plans.

Career Incentive Grants—The state provides career incentive grants to local school districts to maximize the professional growth of staff and provide recognition and leadership opportunities. Among potential incentive opportunities are career ladders and differentiated staffing patterns. In 1987-88 the Department granted $373,819 to 61 districts for this activity.

Teacher Evaluation Grants—New Teacher Evaluation Guidelines established by the State Board of Education call for much more direct supervision and evaluation of school district personnel than previous guidelines. With state grants, local districts are using these guidelines to plan for the establishment of innovative teacher evaluation programs. In 1987-88 the Department granted $465,636 to 80 districts for planning.

Recognition—Two state programs recognize excellence in teaching. The Celebration of Excellence program honors creative teachers and their innovative curriculum projects. Awardees receive a personal cash award and funds to share their curriculum projects with others. In 1987-88, approximately 200 teachers were recognized through the Celebration of Excellence.

The Connecticut Teacher of the Year program recognizes teachers who have inspired a love for learning in their students and who have distinguished themselves in the profession.

Early Childhood Initiatives

Traditionally, instructional programs in the public schools have begun in kindergarten and lasted through Grade 12. During the past five to ten years, however, respected researchers have documented that young children involved in high-quality early childhood programs reap many benefits from those programs in later years.

Many educators are convinced that programs for handicapped and at-risk infants and toddlers are appropriate from birth on. The Department, using federal and state money, has been able to fund such early intervention programs. A demonstration

center has been set up in the Hartford area to coordinate services for developmentally delayed infants and their families. Started in November 1987, the center has served approximately 103 children and their families.

A number of converging factors underscore the desirability of providing services to all preschool-age children. *Four-Year-Olds, Their Families and Public Schools*, a report developed by an advisory committee to the State Board of Education, documented the need and offered a set of recommendations to establish such programs.

Although prekindergarten enrollment in Connecticut's public schools increased slightly to 3,830 in 1987-88, licensed day-care centers, which numbered 1,110 in 1985 with 46,955 children enrolled, increased by January 1988 to 1,272 licensed centers with approximately 62,980 children enrolled.

In support of the State Board of Education's Goal V—to Improve and Expand Early Childhood Programs—the Extended-Day Kindergarten Grant Program provided, in 1987-88, the program's first year, a total of $1 million in grant money as financial incentive to eligible school districts operating an extended-day kindergarten program or planning for such a program. The grant program reimburses local school districts on a percentage basis for personnel costs, equipment and rental space, if necessary. Funds could be used to plan and start new programs or to expand existing ones.

The number of extended-day kindergarten programs in Connecticut continues to increase. In 1985-86, 23 school districts offered extended-day or full-day kindergarten programs (from four hours up to a full school day) in one or more of their elementary schools, either as a pilot or as part of a gradual phase-in. These programs were open to all kindergarten-eligible children, i.e., those who would be five years old by January 1 of the current school year. (There also were a few extended-day kindergarten programs, not represented in the count of 23 districts, that were offered only to children with needs for special education, bilingual or developmental programs.) In 1987-88, a total of 32 districts provided extended-day kindergarten programs.

To assist teachers of both half-day and extended-day kindergarten programs in creating and implementing developmentally appropriate programs, the State Department of Education published in 1988 its two-volume *Guide to Program Development for Kindergarten*.

Instructional Programs, K-12

The basic curriculum for kindergarten through Grade 12, prescribed in Connecticut General Statute 10-16b, must include planned, ongoing and systematic instruction in the arts; career education; consumer education; health and safety; language arts, including reading, writing, grammar, speaking and spelling; mathematics; physical education; science; social studies, including but not limited to citizenship, economics, geography, government and history; and, at the secondary level, one or more foreign languages and vocational education.

To help local school districts meet these instructional responsibilities, the State Department of Education provides assistance in planning, implementing and evaluating their curricula. Primary responsibility for this assistance rests with the Division of Curriculum and Professional Development.

Specialists in each of the subject areas consult with the staffs of individual school districts; hold meetings, conferences and workshops; and furnish materials on curriculum development. The Department has begun to update its series of guides to curriculum development, a major source of information about teaching and learning in subject areas specified in the statutes. Districts use these guides in developing and evaluating programs.

Additionally, in 1986, the Department collected and analyzed the results of a comprehensive survey of curriculum practices in English and reading (part of language arts), mathematics, music, physical education, science, social studies and kindergarten instruction in the state's public schools. A comprehensive analysis of the data is expected to contribute significantly to efforts to ensure equity and excellence in the schools.

A statewide program having a major effect on the elementary and middle school curriculum in mathematics and language arts, including reading and writing, is the mastery test program in Grades 4, 6 and 8, described in Chapter 3. The Department offers a series of workshops around the state to help teachers and administrators analyze in depth the results of the mastery tests and to provide information related to instruction that will help students achieve the mastery test objectives.

Graduation Requirements and Common Core of Learning

In 1984, the General Assembly amended the statewide standard for a high school diploma to require a minimum of 20 credits, beginning for students graduating in 1988. The legislation also specified the number of credits that must be taken in six subject areas: English—4; mathematics—3; social studies—3; science—2; art or vocational education—1; and physical education—1.

In the fall of 1985, the Advisory Panel on Graduation and Course Requirements, upon reviewing mandated course offerings and the merits of an "exit test" for public high school graduation, recommended against requiring additional credits for high school graduation. The group recommended, instead, that the State Board of Education convene a broadly representative panel to identify a "common core of learning" that Connecticut high school graduates could reasonably be expected to achieve.

Accordingly, in the spring of 1986, the board established an Advisory Committee on the Development of a Common Core of Learning for High School Graduates. In the preamble to its report, the committee states:

> The Common Core establishes a vision of what Connecticut's high school graduates should know and be able to do. It represents a broad array of outcomes that should result from the entire K-12 experience, including

academic skills and knowledge, personal and social skills, attitudes and attributes. We believe the Common Core articulates Connecticut's expectations for its schools and its youth, thereby enhancing the quality and equality of educational opportunities throughout the state.

The Common Core includes specific student outcomes in three areas:

- **Attributes and Attitudes**—self-concept, motivation and persistence, responsibility and self-reliance, intellectual curiosity, interpersonal relations, sense of community, moral and ethical values;
- **Skills and Competencies**—reading, writing, speaking, listening, viewing, quantitative skills, reasoning and problem solving, and learning skills;
- **Understandings and Applications**—the arts, careers and vocations, cultures and languages, history and social science, literature, mathematics, physical development and health, science and technology.

A group of 20 school districts has joined the Common Core of Learning Consortia Group and has met numerous times in the past two years to discuss approaches to the implementation of the Common Core of Learning. These towns have committed their own resources to addressing various aspects of the Common Core.

Vocational Education

Vocational education affords an important option for Connecticut students. Many students elect to pursue a vocational education program that will lead to immediate employment following high school graduation. Some continue their education and training in postsecondary institutions and others take a limited number of vocational courses to acquire specific skills for personal enrichment.

Jobs for Connecticut's Future reports that by 1995 industries that supply business, professional and financial services will grow at a rate of 45 percent. Strong growth is also expected in the health, education and personal service industries. These high-growth industries will create a strong demand for professional, technical and service workers. In Connecticut, vocational education programs in the local school districts and the state-operated Vocational-Technical School System are designed to educate the employees who will help meet these needs.

Vocational education in the local schools. The vocational education program offered by the state's comprehensive high schools enables students to explore career options; to learn the basics; to acquire employability and applied skills; and, if they so select, to attain specialized skill levels in a chosen occupational area. The vocational student in a comprehensive high school can prepare for entry into high-technology fields, for jobs in the expanding service industries, for advanced training, or for higher education.

Through the administration of federal vocational resources, services are provided to help handicapped and disadvantaged students succeed in their vocational programs. State-managed federal funds are also used to update curricula and to provide professional development, counseling and program improvement, including a mobile plastics laboratory which serves four different school districts a year. In addition, $1 million in federal funds and $2 million in state funds are made available annually for the purchase of high-technology equipment.

Vocational programs offered by local education agencies include agriculture, business office education, consumer and occupational home economics, cooperative work education, health occupations, marketing education, technology education and trade and industrial education. During 1986-87 and 1987-88, local school districts, in cooperation with regional community colleges, jointly approved curricula which will award college credit through high school vocational programs.

Specific job skills, interpersonal and communication skills and the work ethic are promoted through classroom, laboratory and supervised occupational experiences. The applications identified in Connecticut's Common Core of Learning have been integrated into, and are being reinforced by, the vocational education curriculum. High priority has been placed on ensuring that students will graduate from their high schools' vocational programs with enhanced expectations and prospects as well as the prerequisites needed for life in the 21st century.

Regional Vocational-Technical School System. The state's Regional Vocational-Technical School System offers a wide range of full- and part-time vocational programs for secondary-level students, adults and apprentices. The 17 Vocational-Technical Schools and 5 satellites located in 22 towns provide vocational-technical education in 44 occupational areas on a regional basis. The system is committed to providing a secondary academic program that meets the statutory requirements for high school graduation and offers intensive occupation-specific training below the associate's degree level. In addition, theory training is provided for the 8,000 registered apprentices in the state; short-term, entry-level bilingual vocational training is provided for bilingual adults; and, through the extension program, any interested adult can receive vocational-technical training.

The system offers shared-time programs for students in Grades 9-12 who cannot attend on a full-time basis; exploratory programs for students in Grades 7 and 8, to acquaint them with the career options of the Vocational-Technical School System; and a summer school program that offers exploratory, skill building and remediation.

In order to effectively examine enrollment in the Vocational-Technical School System, it is necessary to determine the significant growth or change factors occurring in the total school-age population. Since 1971, which was the peak of elementary and secondary enrollment in Connecticut, there has been a steady decline in enrollments which reflects the overall decrease in the total school-age population. Between 1987 and 1990, there is an anticipated five percent rise in the elementary enrollment, while the secondary enrollment is expected to continue to decline by approximately seven percent. Despite this, the Vocational-Technical School System has continued to serve

an increasing percentage of the available public school secondary population.

In addition, the female population in the Vocational-Technical School System rose approximately 6 percent from October 1, 1980, to October 1, 1987, resulting in an actual female enrollment of 2,963 or 27.2 percent.

In 1979, the special education enrollment represented 3.5 percent of the vocational-technical schools' enrollment in Grades 9-12. By 1986, the percentage had risen to 11.5 percent, which approximates the state and national averages. Nationwide, the percent of handicapped students in elementary and secondary populations who were served grew from 8 percent in 1976-77 to 11 percent in 1986-87. In 1987-88, handicapped students represented 12.7 percent of the vocational-technical schools' enrollment.

There also has been an increase in the regional vocational-

Vocational-Technical School System
Enrollment by School and by Program
October 1, 1987

Location	Secondary Enrollment	Secondary Shared-Time Enrollment	Long-Term Adult Full-Time Enrollment	Short-Term Adult Apprentice Enrollment	Short-Term Adult Enrollment	Total
Ansonia	510	59	7	25	46	647
Bridgeport	954	150	150	408	300	1,962
Danbury	616	45	13	275	65	1,014
Danielson	452	50	105	47	57	711
Groton	697	90	29	374	125	1,315
Hamden	739	50	123	334	140	1,386
Hartford	595	55	85	870	133	1,738
Manchester	502	59	10	335	40	946
Meriden	815	20	33	68	80	1,016
Middletown	515	0	2	16	75	608
Milford	836	0	22	35	130	1,023
New Britain	684	140	26	215	50	1,115
Norwich	557	50	16	0	0	623
Stamford	498	0	28	650	105	1,281
Torrington	648	59	0	130	40	877
Waterbury	791	78	100	457	135	1,561
Windham	473	0	43	0	35	551
Subtotal	**10,882**	**905**	**792**	**4,239**	**1,556**	**18,374**
Satellites	Secondary Part-Time					
Bristol	49	0	10	0	112	171
Enfield	38	0	0	0	0	38
Essex	85	0	6	0	0	91
Wallingford	55	0	0	0	0	55
Stratford (opened January 1988)		-	-	-	-	-
Subtotal	**227**	**0**	**16**	**0**	**112**	**355**
Total	**11,109**	**905**	**808**	**4,239**	**1,668**	**18,729**

Source: Connecticut Department of Education

Enrollment Comparison 1979-1987

Oct. 1	Vocational-Technical School—Secondary Full-Time Day 9-12	Public School 9-12	% Enrolled in Vocational-Technical Schools
1987	10,882	138,803	7.8
1986	11,352	148,176	7.7
1985	11,934	153,325	7.8
1984	12,086	157,057	7.7
1983	12,408	161,743	7.7
1982	12,324	166,675	7.4
1981	12,276	173,895	7.1
1980	11,996	181,818	6.6
1979	11,604	187,722	6.2

Source: Connecticut Department of Education

technical schools in the types of handicapping conditions and the number of services provided.

A student who graduates from a state vocational-technical school receives a high school diploma with his or her trade area indicated. The table at right contains data on the employment rates for recent vocational-technical school graduates.

Equity in vocational education. A goal of vocational educators is to decrease sex stereotyping by increasing the percentage of male and female students completing nontraditional vocational programs. A vocational program that is nontraditional for one sex is defined as one in which at least 80 percent of the participants are of the opposite sex. In recent years there has been measurable progress toward reversing sex stereotyping. From

Vocational-Technical School System Graduate Information

Activity	Male	Female	Total	% of Sub-total	% of all Graduates
Postsecondary Education	**311**	**129**	**440**		**19.3**
Career-Related Activities					
Military Serv.	124	8	132	8.8	
Employed	1,022	319	1,341	89.0	
Unemployed	15	18	33	2.2	
Total Career	**1,161**	**345**	**1,506**		**66.0**
Miscellaneous					
Full-time Homemaking	-	-	-	-	
Other	20	17	37	11.0	
Deceased/ Incapacitated/Unknown	222	77	299	89.0	
Total Misc.	**242**	**94**	**336**		**14.7**
Total	**1,714**	**568**	**2,282**		

Source: Connecticut Department of Education

Vocational-Technical School System Enrollments in Secondary Full-Time Day Programs

School Year	Total	Minority	Percent Minority	Handicapped	Percent Handicapped	Females	Percent Female
1987-88	10,882	2,386	21.9	1,386	12.7	2,963	27.2
1986-87	11,352	2,367	20.9	1,304	11.5	3,045	26.8
1985-86	11,934	2,371	19.9	1,261	10.6	3,131	26.2
1984-85	12,086	2,250	18.6	1,176	9.7	3,052	25.3
1983-84	12,408	2,100	16.9	1,070	8.6	2,989	24.1
1982-83	12,324	2,045	16.6	989	8.0	2,822	22.9
1981-82	12,276	na	na	813	6.6	2,673	21.8
1980-81	11,996	1,693	14.1	705	5.9	2,521	21.0

Source: Connecticut Department of Education

1980 to 1985, the percentage of female students completing traditionally male programs rose from 1.9 to 5.3; in 1987, the figure was slightly higher (5.6 percent). The percentage of male students completing traditionally female programs increased from 15.9 to 23.6 between 1980 and 1985, but decreased somewhat to 20.4 percent in 1987.

Program completers. During 1986-87, there were 38,134 secondary students in Grades 11 and 12 enrolled in occupational programs. Follow-up studies in February 1988 indicated that 20,111 of these students completed their programs in 1987. The largest number of completers (11,079 or 55.1 percent) was in the Business and Office program category.

The same studies found that of the 6,828 secondary program completers who were available for civilian employment, 6,581 or 96.4 percent found jobs. Of those who were working in February 1988, 64 percent were employed full time in a field related to their training.

Other options chosen by 1987 vocational program completers on the secondary level included additional education (48.0 percent) and the military (2.8 percent).

Nontraditional Vocational Program Completers

Traditionally Female Programs	Percent of Males Completing 1980	1985	1987
Overall	15.9	23.6	20.4
Child care	1.3	0.0	1.9
Clothing Management	4.8	3.8	7.3
Cosmetology	1.2	13.8	7.2
Fashion Design	0.0	0.0	0.0
General Office	22.1	28.2	26.6
Nursing Assistant	5.6	2.8	5.7
Secretarial	2.5	7.4	7.5

Traditionally Male Programs	Percent of Females Completing 1980	1985	1987
Overall	1.9	5.3	5.6
Agricultural Mechanics	26.1	4.0	11.1
Air Conditioning	0.0	0.0	1.1
Appliance Repair	0.0	10.2	0.0
Automobile Trades	2.0	4.8	4.9
Construction Trades	1.4	4.2	0.1
Electronics/Industrial Electronics	2.7	9.3	15.6
Forestry	25.0	25.0	-
Machine/Tool Shop	0.1	2.9	5.4
Natural Resource Renewal	10.5	0.0	37.1
Small Machine Repair	1.3	34.1	19.2
Welding/Sheet Metal	0.0	3.8	7.6

Source: Connecticut Department of Education

Placement Status (February 1988) of 1987 Vocational Program Completers

	Local Education Agencies		Regional Vocational-Technical Schools, Secondary Level	
	No.	%	No.	%
TOTAL	17,866	100.0	2,245	100.0
Pursuing Education	9,219	51.6	439	19.6
Employed	5,267	29.5	1,314	58.5
Military	430	2.4	131	5.8
Unemployed*	216	1.2	31	1.4
Other**	2,734	15.3	330	14.7
Completers in full-time jobs related to training	3,272	18.3	950	42.3
Average Hourly Wage	$6.01		$6.85	

Students enrolled in industrial arts, consumer home economics, and short-term, part-time, exploratory and apprentice programs not included.

* As percent of all graduates including those not seeking employment.

** Not seeking employment or status unknown.

Source: Connecticut Department of Education

Connecticut's recent strong economy has resulted in two years of declines in the statewide unemployment rate of 16- to 19-year-olds and the total statewide unemployment rate. The unemployment rate of local education agency graduates also declined during this period, remaining significantly below the statewide

rate of 16- to 19-year-olds. Despite a slight increase in the unemployment rate of vocational-technical school graduates (from 1.6% to 2.4% in 1987), vocational-technical graduates continued to experience an unemployment rate lower than the total statewide rate (3.3%).

Unemployment Rates* of High School Graduates vs Statewide Rates

Year of Graduation	Percent Unemployed: Local Education Agency Graduates	Regional Vocational-Technical School Graduates	Statewide 16 - 19 Year Olds	Total Statewide
1987	5.2	2.4	11.1	3.3
1986	6.9	1.6	12.5	3.8
1985	8.5	3.5	14.7	4.9
1984	11.8	4.0	13.3	4.6
1983	13.6	3.1	16.5	6.0
1982	13.3	8.2	18.3	6.9
1981	12.6	6.1	17.2	6.2

* Excludes military employment

Source: Connecticut Department of Education

Collaborative Vocational Programs

The outreach and effectiveness of a number of vocational programs can be attributed to their collaborative nature, with several agencies or organizations joining forces to serve a particular need.

Jobs for Connecticut Youth. Sponsored by the State Department of Education since 1981, Jobs for Connecticut Youth (JCY) has marshalled state and local resources to confront barriers to employment for economically and/or educationally disadvantaged youth and to provide employers with an adequately prepared work force. Initially targeted to six areas—Bridgeport, Hartford, New Haven, Northeast, Stamford/Norwalk and Waterbury—the initiative was expanded during 1987-88 to include Meriden/Middletown, New Britain/Bristol, Danbury/Torrington and New London/Norwich.

The focus and intent of JCY have remained constant throughout: to maximize the use of existing resources, to avoid duplication of effort and to strengthen the extant delivery systems serving at-risk youth. The goal of effecting closer coordination among state agencies serving at-risk youth has taken on greater significance with the increased emphasis on services to youth at the state level.

In 1986-87, 38 JCY programs served 914 at-risk youth; in 1987-88, 40 programs served 1,442 participants. Those served ranged in age from 14 to 24 and included dropouts, teen parents, limited-English-proficient individuals, minorities, and persons with disabilities. The JCY program mix differed little from area to area, with the major emphasis focused upon basic skills, work maturity skills, job search skills and transition-to-work assistance.

Job Training Partnership Act (JTPA). The Bureau of Employment and Training administers the Governor's State Education Coordination and Grants program under the Job Training Partnership Act. The available resources provide employment and training services for economically disadvantaged youth and adults and facilitate the coordination and delivery of services among and between public educational agencies and the broader employment and training community. During the two-year period ending June 30, 1988, the bureau issued 52 grants totaling $1,610,172. These resources were provided to local boards of education and state community colleges. Program activities were limited to the delivery of basic skills for both in- and out-of-school youth and adults, with an emphasis upon strategies to facilitate reentry to school and dropout prevention. In several programs, the services were provided in concert with community-based organizations under contract with schools and colleges. A total of 2,103—including 931 youth and 1,172 adults—were served. Approximately 83 percent of the participants successfully completed the programs in which they were enrolled at an average cost of $920 per completion.

Vocational Education Grants for Excellence (VEGE). This program is a collaborative application process designed to encourage the delivery of vocational education services to eligible populations (single parents, displaced homemakers and adults) through joint planning, funding and shared decision making by local communities. VEGE builds upon the JCY and JTPA systems by defining the regions served, constructing planning bodies and utilizing JTPA funding formulas. The major focus of VEGE has been the development of an employment and training system responsive to individual client needs.

During 1987-88, the number of collaborative grants issued increased to eight, with grant awards ranging from $136,000 to $399,000 and totaling $1,828,656. This second year of the three-year effort witnessed a marked increase in the number of individuals served (from 1,300 to 2,700) and an increase (from five to eight) in the number of collaborative groups involved in the design, delivery and oversight of program operations. A two-year, third-party evaluation of the VEGE initiative identified a significant number of positive outcomes and systemic changes in local operating procedures. The evaluation also provided information indicating the need for policy changes, now under consideration, to further improve local collaborative efforts.

Adult Education

Adult education programs have continued to provide basic skills programming to youth and adults 16 years of age or older who are not enrolled in a regular school program. Offered primarily

through local school districts and community-based organizations, basic skills programs include classes in elementary and survival skills, secondary school completion, English for limited-English-proficient adults and Americanization.

The Bureau of Adult Education is responsible for the approval and monitoring of approximately 100 schools and branches which provide educational training. It is also responsible for approving programs at 295 educational institutions, so that veterans and other eligible persons may receive veterans' benefits.

A serious challenge in adult education, however, continues to be basic skills programming. Connecticut law requires every school district to provide basic skills instruction for its residents or to make cooperative arrangements with another school district or regional educational service center to do so. In the past two years, 73 programs (offered by local school districts, community-based organizations and regional service centers) have provided adult education basic skills programs to almost 90,000 individuals. Although efforts to increase enrollments continue to be of major importance, the areas of improved delivery systems, accessibility and increased collaborative ventures with other agencies and funding sources have become significant issues.

Profile of Mandated Adult Education Populations

	Age							
	16-24		25-44		45-59		60+	
Year	No.	%	No.	%	No.	%	No.	%
1987-88	17,414	37.5	21,228	45.7	6,312	13.6	1,463	3.2
1986-87	17,415	37.6	21,769	47.0	5,651	12.2	1,482	3.2
1985-86	19,271	41.0	21,449	45.6	5,150	10.9	1,183	2.5
1984-85	17,839	41.1	19,954	46.0	4,503	10.4	1,087	2.5
1983-84	16,762	40.8	18,244	44.4	5,161	12.6	897	2.2
1982-83	15,762	39.4	17,599	44.0	4,840	12.1	793	1.9

	Race/Sex							
Year 19—	American Indian	Asian/ Pacific Islander	Black	White	Hispanic	Total	% Minority	% Female
87-88	104	3,738	7,923	21,478	13,174	46,417	53.7	60.7
86-87	184	3,592	8,926	21,120	12,495	46,317	54.4	60.5
85-86	119	4,110	9,604	20,620	12,600	47,053	56.2	57.6
84-85	107	3,469	8,855	18,654	12,302	43,383	57.0	56.9
83-84	114	3,440	8,866	17,980	10,664	41,064	56.2	54.3
82-83	93	2,865	8,489	16,337	12,195	39,979	59.1	53.1

Source: Connecticut Department of Education

Changes in legislation have revamped adult high school diploma programs to more closely resemble the credit structure of day diploma programs. However, provisions have been made to provide a variety of options such as credit for experiential learning, individualized learning packets and the ability to test-out (pass a specific subject matter test) for credit for previously acquired knowledge. These options are providing many adults with the flexibility they need to obtain the diploma. In addition to the successful General Educational Development (GED) home study model, another enhancement to the GED program involves the establishment of the honors GED diploma for those who score at least 300 on the battery with no one score less than 55. Since the program began in 1986, more than 1,100 adults have received the honors diploma.

The major adult education undertaking has been the initiation and expansion of the Connecticut Adult Performance Program (CAPP). Project CAPP is designed to provide for greater program accountability through the integration of basic skills instruction with competencies based upon real life experiences. Essential elements include coordination of management, assessment, counseling and instructional systems. In the 1986-87 pilot year of the five-year phase-in, six districts underwent CAPP training directed toward improving basic academic skills and classes for those who are limited English proficient. The initiative was expanded in 1987-88 to include process training for 13 additional districts and awareness training for 12 districts. Combined with the CAPP initiative, a support system of teacher institutes was designed to assist in the transition to the competency-based system. The first institute, offered during 1987-88, provided opportunities for teachers of English as a second language to participate in training and actually become trainers for other adult educators.

Increased collaborative efforts with the Department of Income Maintenance and the Division of Rehabilitation Services have resulted in pilot programs which will test the efficacy of the CAPP system with clients of those agencies. The goal is to bring about a uniform, statewide assessment system.

The Coalition for Literacy, formed in 1985, has completed its initial report on illiteracy in Connecticut and has defined its mission to further define the state's illiteracy problem, examine present delivery systems and recommend ways to strengthen those systems to better respond to the problem. A series of awareness workshops was conducted in 1987-88 to introduce the concept of regional coalitions. Plans call for the establishment of these regional coalitions which will require the participation and support of the total education community, volunteer and community-based organizations, private industry councils and business. The purpose of these regional efforts will be to educate and train individuals and provide job placement at the conclusion of training.

Future directions include continued training for professionals and continued efforts to expand opportunities for adult learners. Efforts will focus on enrollment in private occupational schools. These activities may be a major challenge to both the Department and local program providers as varying demands for funds and reduced resources continue to affect the financial picture.

Learners With Special Needs

Substantial amounts of time and energy are devoted to improving educational opportunities for learners who need some form of special help in order to achieve their full potential. Most of

these programs are administered by the Division of Education Support Services and the Division of Rehabilitation Services.

Child Nutrition Program. The State Department of Education serves the nutritional needs of school children in both the public and private sectors through its administration of several federally funded child nutrition programs.

The number of children receiving free or reduced-price lunches has steadily declined since 1985-86 and currently represents only 32 percent of the total number of students participating in the National School Lunch Program. The number of children paying full price, however, has increased each year. This can be attributed to two factors: the excellent economic condition of the Northeast over the past few years and the efforts of local school systems to better meet the needs and desires of students in the School Lunch Program.

The Special Milk Program has shown an increase for the first time. This is primarily due to a change in legislation making the program available to kindergarten children who do not have access to the National School Lunch Program.

National School Lunch

Fiscal Year	Total	Paid	Free	Reduced
1987-88	221,640	150,715	59,843	11,082
1986-87	216,447	139,130	64,895	12,442
1985-86	207,926	129,106	66,314	12,506
1984-85	212,447	128,403	70,725	13,319
1983-84	207,884	119,350	75,221	13,313
1982-83	206,168	117,706	74,645	13,817
1981-82	203,420	110,548	75,991	15,388
1980-81	199,044	110,398	71,775	16,871
1979-80	262,840	151,741	89,286	21,813
1978-79	279,799	170,308	87,527	21,964

Source: Connecticut Department of Education

School Breakfast

Fiscal Year	Paid	Free	Reduced
1987-88	921	10,250	346
1986-87	748	8,586	189
1985-86	554	5,949	104
1984-85	661	7,792	102
1983-84	696	8,027	90
1982-83	649	6,836	86
1981-82	647	5,161	116
1980-81	795	4,937	133
1979-80	4,460	5,714	295
1978-79	3,487	3,604	271

Source: Connecticut Department of Education

Special Milk Program

Fiscal Year	Paid	Free
1987-88	27,115	2,113
1986-87	25,820	1,880
1985-86	23,410	2,099
1984-85	23,732	2,228
1983-84	25,323	2,745
1982-83	26,243	2,555
1981-82	26,824	2,848
1980-81	29,791	3,319
1979-80	178,709	15,893
1978-79	213,873	17,729

Source: Connecticut Department of Education

Due to a state initiative begun in the 1986-87 school year, participation in the School Breakfast Program has increased by 74 percent since 1985-86, with the largest numbers reflected among children eligible for free meals.

Compensatory education. Under the state's Education Evaluation and Remedial Assistance Act, school districts are required to use assessment results for instructional improvement, identify individual students in need of remedial assistance, provide remedial assistance to identified students, and evaluate instructional programs in basic skills.

Compensatory education programs supported through Chapter 1 of the federal Education Consolidation and Improvement Act, together with the state's Education Evaulation and Remedial Assistance Act, provide local school districts with funding to meet the needs of educationally disadvantaged children. In 1987-88 state and federal funding for grants to local school districts totaled $47,210,591. Districts use funds primarily to support supplementary programs in remedial mathematics, reading and language arts for both public and nonpublic school students.

In mathematics, normal curve equivalent (NCE) gains for 1987-88 (+5.4 NCEs) exceeded the +5 NCEs considered to be evidence of meaningful educational growth. In reading, NCE gains were positive (+4.0 NCEs) but did not exceed the state goal of +5 NCEs. In each of the three previous biennial assessments, NCE gains in both mathematics and reading did exceed this goal.

While enrollment in compensatory education programs dropped from a high of more than 60,000 in 1979-80 to approximately 44,000 in 1982-83, it moved back up to 54,474 by 1986-87, dropping back slightly to 54,175 in 1987-88. This represents ten percent of the total enrollment in both public and nonpublic schools, a percentage which has changed little in the past four years.

A comparison of Connecticut's compensatory education staffing pattern to the nation's shows that, in 1985-86, Connecticut employed a higher percentage of teacher aides (45 vs. 38), a lower percentage of teachers (42 vs. 47) and a similar percentage

of administrators (2 vs. 3). National data for subsequent years are not available. However, by 1987-88, the percentage of teachers employed in Connecticut's compensatory education programs had increased to 45 and the percentage of teacher aides had declined to 38, while the percentage of administrators remained steady at 2.

Federal and state guidelines and procedures for planning, monitoring and evaluating compensatory education programs have been consolidated by the State Department of Education. During 1987-88, one-third of the school districts were monitored for compliance with these consolidated guidelines under the state's Program Compliance Review procedure.

Compensatory Education Achievement

Year*	Overall Mean Gain in Mathematics (in NCEs**)	Overall Mean Gain in Reading (in NCEs**)
1987-88	+ 5.4	+ 4.0
1985-86	+ 5.6	+ 6.4
1983-84	+ 7.9	+ 7.1
1981-82	+ 6.7	+ 6.8

* Achievement data are collected biennially.
** Normal Curve Equivalents

Source: Connecticut Department of Education

Priority School District Program. The Priority School District Grant Program has a clear statement of purpose: "to assist the school districts with the greatest demonstrated academic need to improve student achievement and enhance educational opportunities," with the primary focus on basic skills achievement and the improvement of instruction.

Priority School District Program activities, planned cooperatively by school districts and the State Department of Education, supplement other resources of Connecticut's educational community to provide direct services to school districts. Department goals include establishing more effective State Department of Education and school district partnerships and targeting more services, materials and technical assistance resources to these districts.

These resources, to the greatest possible extent, enhance successful ongoing activities and facilitate new planning, development, evaluation and training initiatives.

In 1987-88, 20 school districts, with a combined enrollment of 137,215, participated in the Priority School District Grant Program.

Neglected and delinquent. Children who are institutionalized for neglect or delinquency often fail to achieve much academic success in school. These children receive services through the school district Chapter 1 program. In addition, in 1987-88, $540,076 was awarded to state correctional institutions and state institutions for neglected and delinquent students. These institutions served nearly 1,500 young adults under the age of 21.

Number of Students Eligible for Programs for Neglected and Delinquent Children

	State*			Local	
Year	Neglected	Delinquent	Adult Correctional	Neglected	Delinquent
1987	55	123	371	657	407
1986	37	126	416	634	478
1985	41	93	1,314	620	449
1984	35	58	1,259	621	419
1983	47	58	1,263	580	523
1982	34	24	1,008	603	506
1981	40	14	573	822	310
1980	37	12	971	782	298
1979	52	77	749	684	262
1978	54	135	695	531	77
1977	56	135	676	562	69

* The Department of Children and Youth Services provides programs for neglected at the Albert P. Redway School, Warehouse Point, and for delinquent at the Long Lane School. The Department of Correction runs the program for institutionalized young adults 16 to 21 years old.

Source: Connecticut Department of Education

Migrant education. The Connecticut Migratory Children's Program offers a wide range of services to eligible migrant students. Services include tutorial instruction in basic skills, health and social services, career/vocational counseling and referral, and parent involvement activities.

Migrant Programs

Fiscal Year	Districts	Students	NCE* Achievement Gains Reading	Mathematics
1987-88	10	3,872	+2.0	+7.4
1986-87	11	4,056	N/A**	N/A**
1985-86	12	4,063	+2.3	+3.6
1984-85	14	3,841	N/A**	N/A**
1983-84	15	3,671	+3.9	+1.5
1982-83	14	3,536	+2.9	+3.8
1981-82	13	3,509	+6.2	+5.1

* Normal Curve Equivalents
** Achievement is now assessed biennially.

Source: Connecticut Department of Education

In 1987-88, 10 communities, 7 of which were Priority School Districts, participated in the migrant program. An estimated 3,872 students were served. Approximately the same number of students were expected to be served in the migrant program during 1988-89.

Students in migrant programs continued to demonstrate normal curve equivalent (NCE) gains in both reading and mathematics, although 1987-88 gains in reading (+2.0 NCEs) were less than the +5 points considered meaningful. Achievement gains in mathematics were measured at +7.4 NCEs in 1987-88.

Bilingual education. State legislation requires school districts to provide bilingual education programs if, in any school, there are at least 20 limited-English-proficient students whose dominant language is other than English. In 1987-88, 12,049 students were served in mandated bilingual education programs. Of this total, 11,403 or 94.6 percent were Spanish dominant. The remaining 5.4 percent was comprised of seven other linguistic groups.

Number of Students Served in State-Mandated Bilingual Education Programs

	1984-85	1985-86	1986-87	1987-88
Spanish	10,493	10,726	11,054	11,403
Portuguese	261	228	183	205
Laotian	135	121	152	125
Vietnamese	125	111	89	57
Cambodian	121	145	142	85
Italian	42	47	41	35
Polish	30	72	69	45
Haitian/Creole	0	32	65	94
Total	11,207	11,482	11,795	12,049

Source: Connecticut Department of Education

During recent years there has been a significant increase in the number of students enrolled in bilingual education programs whose dominant language is Haitian/Creole. In 1984-85, no students who were Haitian/Creole dominant were served in bilingual programs. However, subsequent years showed enrollments of 32, 65 and, in 1987-88, 94.

In addition to the 12,049 limited-English-proficient students who were served in bilingual education programs in 1987-88, 875 other limited-English-proficient students were identified. While school districts may provide some form of program for these students, they are not required to do so by state law, since there are fewer than 20 in any one school.

In 1987-88, the total expenditure for bilingual education programs in Connecticut was $45.4 million, with the state providing 4.8 percent of the total. Also that year, 985.4 full-time equivalent staff members, including 11.5 administrators, were assigned to bilingual education programs.

Expenditures for Bilingual Education Programs (In Millions)

	1984-85	1985-86	1986-87	1987-88
Local	11.56 (52.4%)	18.63 (53.5%)	29.10 (73.7%)	34.47 (75.9%)
State	1.81 (8.2%)	1.91 (5.5%)	2.09 (5.3%)	2.20 (4.8%)
Other	8.68 (39.4%)	14.28 (41.0%)	8.30 (21.0%)	8.73 (19.2%)
Total	22.05	34.82	39.49	45.40

Source: Connecticut Department of Education

Staffing Patterns in Bilingual Education Programs (Full-Time Equivalents)

	1984-85	1985-86	1986-87	1987-88
Administrator	11.0	10.8	11.9	11.5
Teacher	527.6	596.9	634.4	688.4
Aide	174.5	180.5	185.5	192.0
Support Service	24.2	39.1	57.3	72.7
Clerical Staff	11.4	13.3	12.3	13.4
Other	9.0	12.5	8.4	7.4
Total	757.7	853.1	909.8	985.4

Source: Connecticut Department of Education

A statewide evaluation of mandated bilingual education programs, based on student and program data for the school year 1987-88, includes the following findings:

- Students exiting the programs displayed strong language proficiency and English achievement scores at the elementary grades, but English scores were considerably lower at the middle and high school grades.
- In general, students in most grades showed improvement in Spanish reading and mathematics, indicating that students receiving instruction in Spanish are making progress toward the acquisition of basic skills.
- English achievement results for continuing students were predictably low, reflecting these students' limited experiences with English. Most (77%) of these students had been enrolled in the programs for three years or fewer; 37 percent had been in the program only one year.

Special education. In 1987-88, there were 79,896 students served in special education programs in Connecticut. The increase over previous years is due to expanded services and increased reporting of gifted and talented students. During 1987-88, 160 of the state's 166 school districts (96.4%) had at least one

Number of Local Public School Districts With Programs for Gifted and Talented Students

Fall of School Year	Level* Elementary	Middle/ Junior High	High School	No. of Districts With at Least One Program
1987	150	87	38	160
1986	149	85	38	159
1985	145	84	36	156
1984	137	80	32	139
1983	127	76	29	135
1982	121	72	27	133
1981	114	68	26	127
1980	109	63	24	122
1979	91	48	19	105
1978	77	42	20	92
1977	57	33	18	71
1976	46	28	12	62

* Of the state's 166 school districts, 158 have elementary schools, 125 have middle/junior high schools and 118 have high school children.

Source: Connecticut Department of Education

program for gifted and talented students. Of the districts with elementary grades, 150 (95%) offered programs, as did 87 (69.6%) of those with middle or junior high school students and 38 (32.2%) of those with senior high school students.

Excluding gifted and talented students and pregnant students from the totals, the number served in other special education programs during 1987-88 was 35 below the 1981-82 peak of 66,589. The percentage of all students served increased from 9.3 percent in 1977-78 to 14 percent in 1987-88. Learning disabled students comprised 6.4 percent of the school population.

Special Education Students

Primary Impairment	Percent of All Students 1977-78	1987-88
Autistic	-	0.03
Hearing Impairment	0.14	0.14
Learning Disabled	3.41	6.42
Mentally Retarded	1.34	0.85
Multihandicapped	-	0.21
Neurological Impairment	0.07	0.18
Orthopedic Impairment	0.09	0.06
Social/Emotional Maladjustment	1.47	2.69
Speech Impairment	2.30	2.63
Vision Impairment	0.04	0.12
Other Health Impairment	0.05	0.08
Uncategorized	0.34	0.34
Total	9.25	14.00

Source: Connecticut Department of Education

Equity and Excellence

Providing support services to students with special needs is one part of the effort to achieve the State Board of Education's first goal: To Ensure Equity and Excellence for All Children. Equity and excellence have many meanings, however, and the quest for this goal must be animated by the depth and richness of those meanings. In Connecticut, racial and ethnic isolation are significant barriers to educational equity and excellence; overcoming that isolation has become a central objective of the State Board and State Department of Education.

In January 1988, the Department presented to the Board *A Report on Racial/Ethnic Equity and Desegregation in Connecticut Public Schools*. The report documented growing racial and ethnic isolation in Connecticut schools and asserted the fundamental principle that integrated education is an essential component of quality education. To provide a basis for discussion of the problem and exploration of solutions, the report included the following four broad recommendations that emphasized voluntary approaches to integrating Connecticut schools:

- That the state, through administrative and legislative means, endorse the concept of "collective responsibility" for desegregating the public schools of Connecticut;
- That the state, through the State Board of Education, make available substantial financial incentives to school districts that plan and implement voluntary interdistrict programs and advance desegregation, racial balance and integrated education in Connecticut's public schools;
- That the State Department of Education provide technical assistance to school districts in the development and implementation of plans to achieve and maintain desegregated schools; and
- That the State Department of Education undertake broad-based planning with other agencies concerned with housing, transportation and other factors that contribute to segregation in the public schools, to find ways to counteract adverse influences on integration.

In response to the report, the State Board of Education directed the Department to study the issue further, solicit a wide range of public reaction and develop a special report that would specifically address possible cooperative approaches and voluntary efforts to reduce racial and ethnic isolation in Connecticut schools.

Rehabilitation Services

The mission of the Division of Rehabilitation Services (DRS) is to restore persons with disabilities to productive work and independence through a program of individualized rehabilita-

tion services. The division administers comprehensive services aimed at carrying out this mission, including programs of vocational rehabilitation (VR), supported employment and independent living (IL), and Social Security disability determination services.

Since 1986, DRS has continued to increase its emphasis on meeting the unique and multifaceted rehabilitation needs of individuals with severe disabilities. Efforts in this area include expanding vocational options to include supported employment within the competitive labor force; enhancing cooperative efforts with school districts to facilitate the transition of students with disabilities into productive postsecondary activity; expanding and developing community-based independent living services; facilitating consumer input into program planning and operations; and targeting underserved populations.

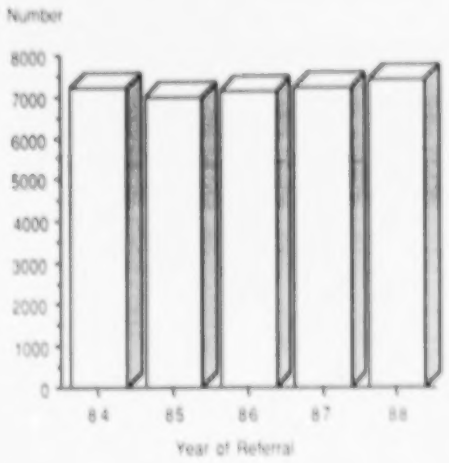
Vocational Rehabilitation. Between July 1, 1986, and June 30, 1988, the vocational rehabilitation program provided services to 28,997 persons with disabilities. Services included diagnostic evaluation, vocational counseling and guidance, physical and mental restoration, rehabilitation engineering consultation, technological aids and adaptive equipment, vocational and postsecondary training, and assistance in finding and maintaining employment.

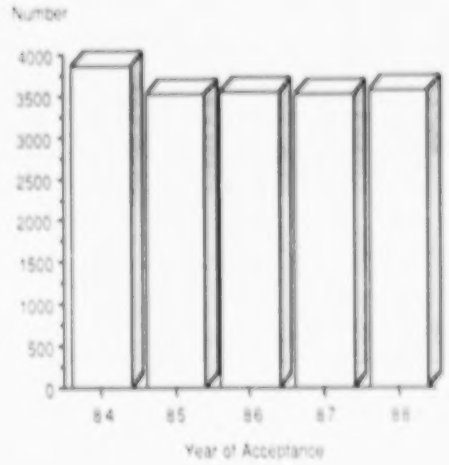
The number of individuals referred to the VR program increased from 7,129 in 1985-86 to 7,219 in 1986-87, then to 7,381 in 1987-88. The number of individuals determined eligible for VR services remained relatively stable, totalling 3,551 in 1985-86, 3,526 in 1986-87 and 3,564 in 1987-88. The number of individuals rehabilitated decreased from 2,184 in 1985-86 to 2,143 in 1986-87 and to 1,906 in 1987-88. This decline resulted in part from the division's increased emphasis on serving clients with severe disabilities who often require diversified, long-term services. The percentage of rehabilitated individuals who were severely disabled (SD), however, rose from 52 percent in 1985-86 to 55 percent in 1986-87, then to 58 percent in 1987-88. Although the total number of individuals placed in competitive jobs decreased when compared to 1985-86, the percentage of those placed into competitive employment rose steadily, from 83 percent in 1985-86 to 84 percent in 1986-87, and to 88 percent in 1987-88. Total annual earnings for the 1,906 persons rehabilitated in 1987-88 increased from $7,524,583 when they applied for services to $22,474,640 when they were rehabilitated into employment. This is an increase of almost 200 percent. For those with severe disabilities, earnings increased 212 percent, from $3,753,033 to $11,708,910.

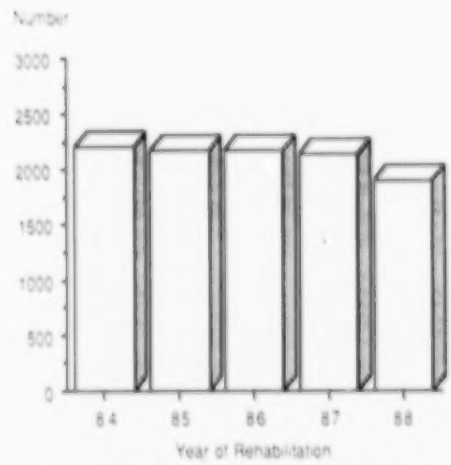
The prevalence of various types of disabilities among persons who were rehabilitated did not change significantly between 1986 and 1988, with the largest number (more than 30 percent) identified as having psychiatric impairments. The percentage of individuals with mental retardation, however, decreased from 20 percent in 1986-87 to 15 percent in 1987-88, while the percentage of those rehabilitated who had learning disabilities increased from four to eight percent during the same period.

Among clients whose cases were closed (including those rehabilitated into employment as well as those not completing their planned VR program), the number who had participated in training programs decreased from 2,273 in 1985-86 to 1,911 in 1986-87 and to 1,654 in 1987-88. Over this same period, there also was a decrease in the number and percentage of clients in

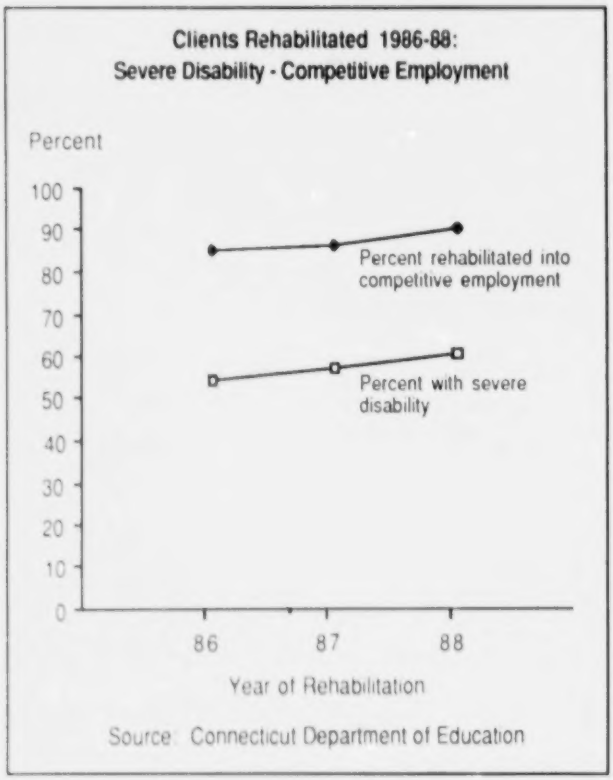
Number of Clients Referred to, Accepted and Rehabilitated by the Division of Rehabilitation Services 1984-1988





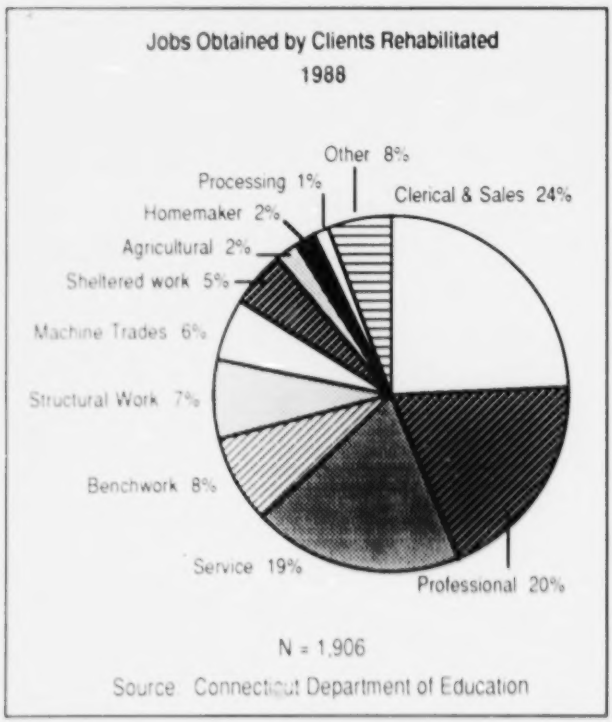


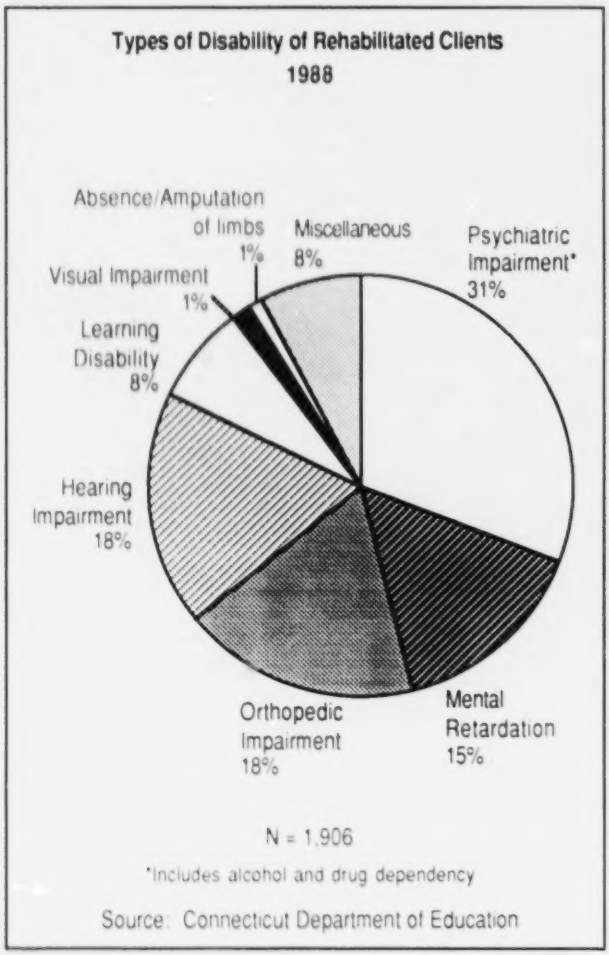
Source: Connecticut Department of Education

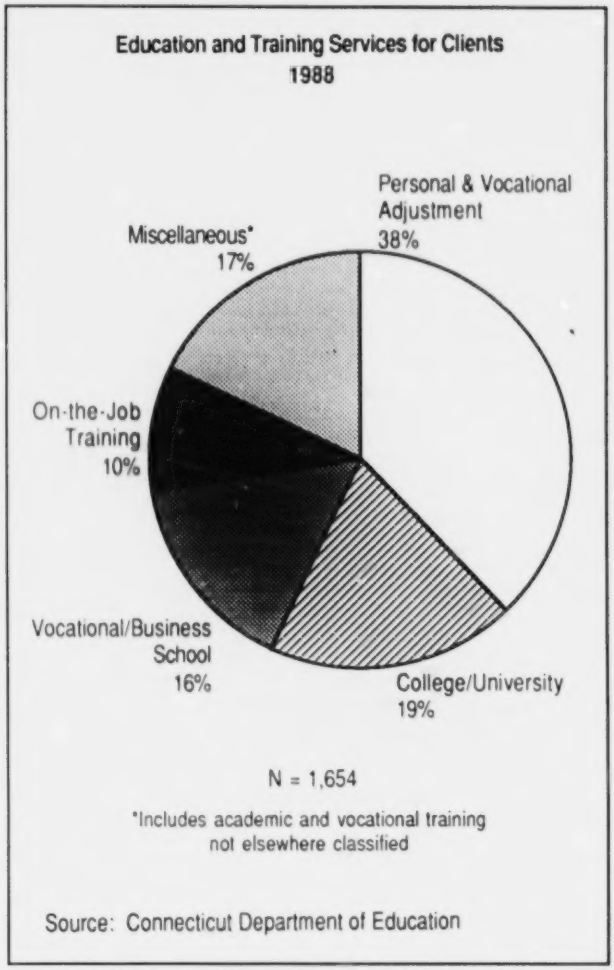


personal and vocational adjustment training within a sheltered workshop setting. These changes resulted from the division's commitment to placing individuals with severe disabilities into integrated job settings, including on-the-job training, transitional employment and supported work. Such opportunities have enabled increasing numbers of job seekers to move into jobs in business and industry, with the support of individualized services such as counseling, job coaching and job shadowing at the work site. In addition, there was an increase in the proportion of clients who received education and training in colleges and universities, vocational and business schools, and other skill training programs.

Expanding services to individuals with severe disabilities. The recent development of supported employment in Connecticut has demonstrated that individuals with severe disabilities, who were traditionally employed in segregated settings, can work in the competitive labor force alongside nondisabled coworkers. As one of 27 states to receive a five-year grant for more than $2 million from the Office of Special Education and Rehabilitative Services (OSERS) in 1986, Connecticut, with DRS as the lead agency, is at the national forefront of the supported employment initiative. A major activity of this grant is to establish a coordinated case service delivery and funding system among the division, the Board of Education and Services for the Blind, and the Departments of Mental Health and Mental







Retardation. Other grant accomplishments include the implementation of the Select Ability Matching Network, a statewide computerized job bank which matches employers with qualified job seekers with severe disabilities; and the provision of ongoing training and technical assistance on the benefits of supported employment to employers, school districts, parents and service providers.

In addition to the OSERS grant, the division receives approximately $250,000 annually in federal funding to provide direct supported employment services. Since 1987, 183 severely disabled clients of the division have benefited from these services.

To enhance the availability of supported employment opportunities to persons with traumatic brain injuries (TBI), the division awarded contracts totalling $115,000 for 1988-89 to DATAHR in Danbury and the Kuhn Center in Meriden. Since 1986, the division has received approximately $100,000 per year in state funds to provide innovative and individualized vocational rehabilitation services to persons with TBI. In conjunction with the Departments of Income Maintenance and Human Resources and the Connecticut Traumatic Brain Injury Association, these funds have enabled DRS to provide services to 175 persons with severe TBI. To prepare the individual for the demands of the workplace, services have included cognitive therapy, work adjustment assistance and socialization skills training.

In addition, a $45,000 contract was awarded to East Central Mental Health Services in Branford to develop supported employment opportunities for students with psychiatric impairments.

To address the special vocational rehabilitation needs of persons with learning disabilities (LD), and to foster cooperative program planning, the division established a Task Force on Learning Disabilities composed of service providers, consumers, advocates from public and private agencies, and school personnel. As a result of this committee's work, a pilot project was initiated in 1987 in Bridgeport to effect cooperative, creative case service planning for individuals with LD. Through this effort, a designated DRS resource counselor provides information and technical assistance on learning disabilities to staff and coordinates an LD interdisciplinary team composed of service providers, medical and psychological specialists, educators and advocates. This model was expanded to all five DRS districts in 1988.

Transition from school to work. Historically, the division has recognized the value of assigning vocational rehabilitation counselors full-time to high schools to serve students with disabilities. In cooperation with school personnel, DRS transition counselors facilitate the movement of their clients from the school environment to appropriate postsecondary activity, including education, training and employment. The counselors' duties include attending planning and placement team (PPT) meetings, arranging for diagnostic evaluations and coordinating the joint development of the Individualized Educational Program (IEP) and the Individualized Written Rehabilitation Program (IWRP). Statewide, the number of full-time transition counseling staff increased to seven in 1988.

Through state legislation passed in 1986, three DRS transition counselors were assigned full-time to provide transition planning for students with disabilities in the Bloomfield, Hartford, West Hartford and Wethersfield schools. Between July 1, 1986, and June 30, 1988, these counselors attended 372 PPT meetings, developed 303 joint IEP/IWRP plans, and assisted with the job placement of 71 students. Transition assistance provided by other DRS counselors across the state resulted in the employment of an additional 576 students.

Independent living. During this two-year period, the division significantly expanded independent living services for persons with severe disabilities.

Through DRS funding, two new Centers for Independent Living (CILs) were established in the Waterbury and Norwich areas, bringing the total number of CILs within the state to four. Between 1986 and 1988, existing centers in Hartford and Stratford provided IL services to more than 650 individuals. All four centers are community-based and consumer-controlled, and provide services which are tailored to meet the unique rehabilitation needs of their constituencies. Services offered through the CILs include information and referral, peer counseling and IL skills and advocacy training.

Through the division's comprehensive IL service delivery program, which provides services to individuals not eligible for

the VR program because of the severity of their disabilities, nearly 300 individuals were provided services, including housing and vehicle adaptations, electronic and adaptive equipment, personal care assistance, physical therapy and environmental modifications.

Disability determination services. Disability Determination Services (DDS) is responsible for processing claims for Social Security disability benefits by making accurate, prompt decisions on each applicant's eligibility for Social Security Disability Insurance (SSDI) and Supplemental Security Income (SSI). Between July 1, 1986, and June 30, 1988, DDS processed nearly 50,000 claims, including 29,025 applications for SSDI benefits and 20,904 for SSI support. During these two years, payments to eligible applicants represented an estimated $508 million. Case processing time in 1987-88 averaged approximately 70 days. In both 1986-87 and 1987-88, DDS exceeded the federal accuracy goal of 90.6 percent by almost five percent in determining eligibility for Social Security benefits.

The interrelationship between the DDS and vocational rehabilitation programs has assisted substantial numbers of Social Security recipients to become wage earners. During 1987-88, 812 recipients were found eligible for VR services; of these, 721 (89 percent) had no earnings at all at the time of eligibility determination. During the same period, 384 recipients were rehabilitated into employment, with projected annual earnings totalling $2,211,248. With vocational rehabilitation services, these individuals became taxpayers instead of tax recipients. It is estimated that for every dollar spent in 1987 to successfully rehabilitate DRS clients, eight dollars were returned to the government in the form of taxes and economic productivity.

Consumer initiatives. In order to provide consumers and the general public with greater access and input regarding its policies and programs, DRS undertook several initiatives during 1986-87 and 1987-88. A 51-member Statewide Advisory Council consisting of consumers, rehabilitation service providers from the public and private sectors, legislators and employers, was established. Its mission is to advise the division director on the direction, nature, scope and outcomes of DRS programs and services. Several other advisory committees were initiated or enhanced, including the Supported Employment Advisory Committee, the 45-member State Independent Living Council and the task forces on learning disabilities and traumatic brain injuries. Ten public forums were held statewide to determine firsthand the rehabilitation needs and concerns of individuals with severe disabilities. Finally, a statewide toll-free hot line was implemented to provide information about the division's programs and to encourage ongoing input from consumers.

5 Finance

Quality education — the learning opportunities to which all children are entitled and to which Connecticut's Board of Education is committed — costs money. While money alone is not a guarantee of quality education, such education clearly cannot be provided without it.

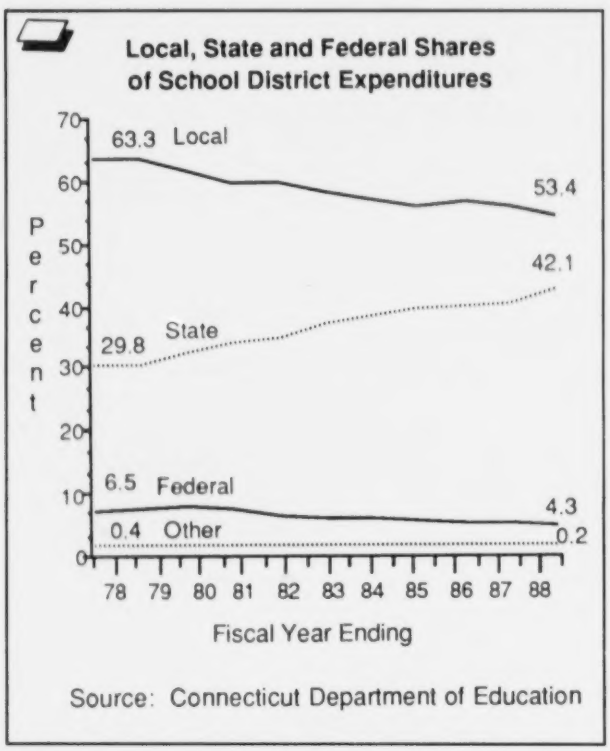
The level of funding in Connecticut and the way in which available resources are allocated reflect both the state's commitment and its priorities. Adequate financial support for the public schools and the choice of programs and services to which the dollars are directed are critical factors in the achievement of equity and excellence.

Sources of Funds

Public elementary and secondary education in Connecticut is supported by a mix of federal, state and local revenues.

Since 1980-81, the state share of all expenditures for public elementary and secondary education has increased steadily. During the same period, the federal share of educational expenditures has declined slightly. The local share of educational expenditures has also declined, but local governments continue to provide the majority of the funding for education.

The shift in the balance of state and local funding is the result of legislation in the 1970s, following the *Horton vs Meskill* case,

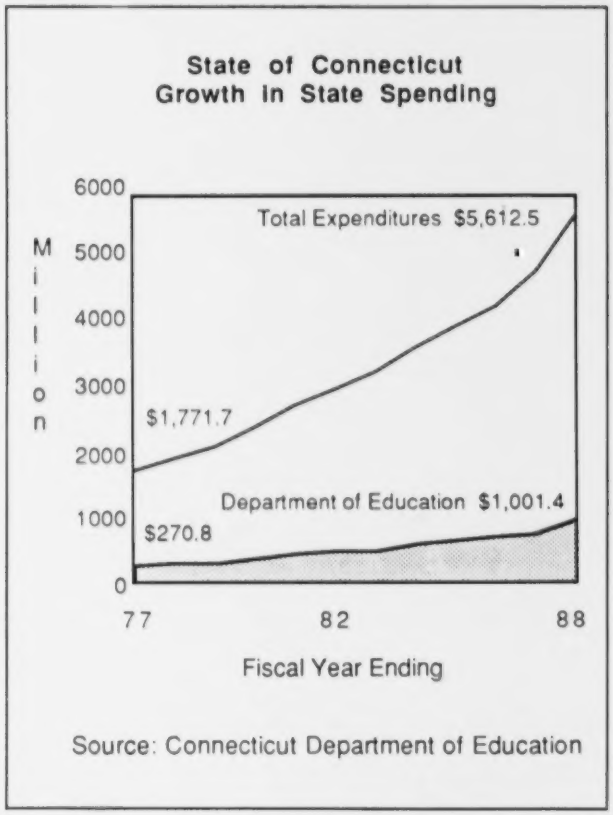


and of the State Board of Education's advocacy of state support of public education equal to the funding provided by local school districts. Federal funds, after a period of increases in the 70s, have remained relatively constant since 1980, representing a drop in real dollars adjusted for inflation.

In its April 1977 decision in the case of *Horton vs Meskill*, the Connecticut Supreme Court declared that it is the state's responsibility to provide "a substantially equal educational opportunity" for all public school students, regardless of town residence. Overreliance on local property taxes, the court ruled, discriminates against pupils in lower-wealth towns, for whom the quality of education is "narrower and lower" than that available in wealthier communities able to spend more at lower tax rates.

In January 1979 the State Board of Education adopted a long-term goal to increase state aid to a level at least equal to local revenues for public elementary and secondary education. In the same year, the Connecticut General Assembly, in response to the court decision, enacted legislation providing for education equalization aid to be distributed to the cities and towns in Connecticut through a guaranteed tax base (GTB) formula.

Progress has been made in moving toward the 50-50 funding goal. As the graph on page 47 shows, the state share of expenditures for public elementary and secondary education in 1987-88 was 42.1 percent of total expenditures, up from 33.3 percent in 1980-81 and 29.8 percent in 1978-79, the fiscal year during which the State Board of Education established the 50-50 goal. The local contribution has decreased accordingly.



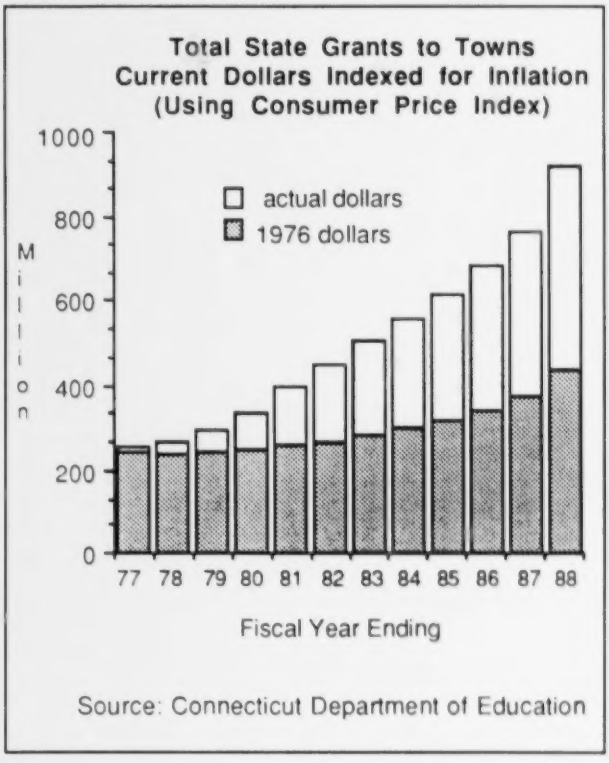
State Expenditures for Public Elementary and Secondary Education

State expenditures for public elementary and secondary education increased 269.1 percent from $372.2 million in 1979-80 to just over $1 billion in 1987-88. During this same period, the consumer price index increased 49.2 percent.

As a portion of the state budget, expenditures for public elementary and secondary education have risen since 1976-77 from 15.3 percent to 17.8 percent in 1987-88. During this period, the education budget went up due to a combination of rising expenditures for the education equalization grants to towns and increasing emphasis on the provision of equal educational opportunity for all students, as well as inflation. Beginning in 1986-87, the Education Enhancement Act provided an additional three-year boost in state aid to school districts utilizing the Educational Excellence Trust Fund, a pool of money created by the General Assembly from earlier state budget surpluses.

Grants to Towns and School Districts

Nearly 92 percent of the Department's budget is used for grants to support instructional programs and services in local educational agencies. Five and one-half percent supports the state

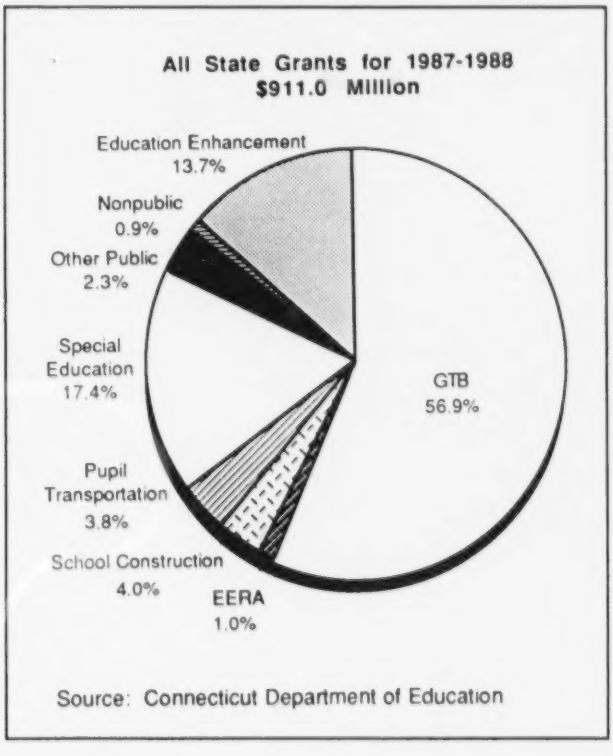


Vocational-Technical School System, operating 17 regional vocational-technical high schools and 5 satellite schools and providing programs for nearly 20,000 students throughout

Connecticut. One percent supports education program leadership, while less than two percent supports state services and management.

The largest grant to towns — and the largest program in the Department of Education budget — is the education equalization aid distributed through the guaranteed tax base (GTB) formula. The GTB grants have been disbursed according to each town's property/income wealth, local effort to support education and educational need, using three-year-old data as the basis for computing each year's GTB grants. In 1987-88, $518.2 million was disbursed to Connecticut towns under the GTB formula.

Other major state grant programs, now funded on an equalizing basis but distributed to school districts rather than to towns, include transportation, school construction, adult and special education. Under these grant formulas, low-wealth districts receive more aid than wealthy districts. Nearly 96 percent of all state general fund grants for education are equalized in some way. These grants to school districts, plus the Education Enhancement Act grants, combined with the GTB grants to towns, accounted for $877.3 million in 1987-88. All other grants added an additional $33.7 million for a total of $911.0 million. Even when indexed for inflation, the level of funding for all grants has been increasing steadily since 1980.



Source: Connecticut Department of Education

Funds provided through state grant programs constitute one of several factors that affect school tax rates, which have continued to decline throughout the 1980s. ("School tax rate" is a measure, established by the GTB grant program, of local tax effort for education based on a town's property and income wealth.) The table above right shows that districts at all levels have experienced a decline in school tax rates. This reduction is due in part to both the overall expansion in property value in the state during the middle of the decade and the increase in state education aid to poorer communities. For these reasons, middle to lower wealth towns — those with the higher tax efforts — experienced bigger decreases.

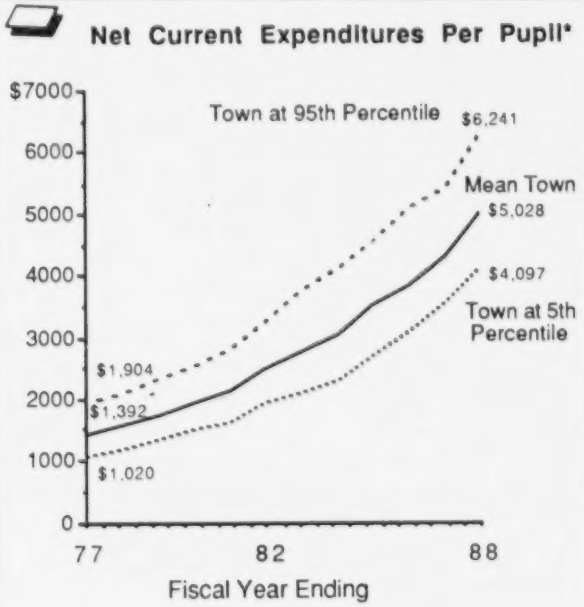
School Tax Rates
1980-88

Range in School Tax Rates	1979-80	1987-88	Percent Change 1980-88
High Town	52.49	35.81	-31.8
95th percentile	39.49	26.71	-32.4
Mean	25.54	17.05	-33.2
5th percentile	10.74	8.92	-17.0
Low Town	6.08	4.60	-24.3
95th to 5th Ratio	3.68	2.99	-18.8

Source: Connecticut Department of Education

Disparities Continue

Despite the equalizing intent of the GTB formula and other state grant programs, substantial disparities in educational expendi-



* Net current expenditures per pupil include expenses per pupil for daily operation of the school program but do not include transportation, capital outlay, debt service expenses and tuition received from nonresident pupils.

Source: Connecticut Department of Education

tures continue to exist among Connecticut towns. The graph "Net Current Expenditures Per Pupil" (see page 49) illustrates the sizable range in per pupil expenditures that exists even after the equalization impact of state grants. The highest-spending town continues to spend more than twice as much per pupil as the lowest-spending town, just as it did in 1978-79. Equality of educational opportunity for all public school students still remains a central, but elusive, goal.

There has been some decrease, however, in the disparity in expenditures between high-spending and low-spending towns. In 1978-79 the town at the 95th percentile — the 9th highest-spending town — spent 81 percent more than the 9th lowest-spending town at the 5th percentile. In 1987-88, the per pupil spending of the 95th percentile town exceeded that of the 5th percentile town by 52.3 percent.

Teacher/Student Ratios
1985-86 and 1987-88

Teachers and Support Staff per 1000 students

Range	1985-86	1987-88
Low	59.6	65.8
5th percentile	65.8	69.2
Mean	75.8	79.7
95th percentile	92.7	97.3
High	101.8	135.0

Source: Connecticut Department of Education

The Education Enhancement Act

The 1986 legislature passed and Governor O'Neill signed into law the Education Enhancement Act (EEA), which greatly strengthened standards for teacher certification and provided, for the three years from 1986-87 through 1988-89, substantial amounts of aid for salary and staff improvements. This voluntary program, which achieved 98 percent participation from the eligible districts, was based on the recommendations of the Governor's Commission on Equity and Excellence in Education. EEA has provided more than $360 million to increase minimum salaries to recommended levels, to reopen contracts to increase the salaries of experienced teachers, and to add teachers in the districts with the poorest teacher-pupil ratios.

The intent of the teacher salary and staffing programs of the Education Enhancement Act was to (1) provide salary levels adequate to attract and retain high-quality teachers, and (2) help bring about a more equitable distribution of teachers and teaching talent among the school districts. Since studies have shown that two-thirds of the disparities in per-pupil spending could be attributed to staffing patterns and compensation, EEA was aimed at the largest source of expenditure disparities.

The effect of the Education Enhancement Act has been dramatic. From the fall of 1986 to the fall of 1987, the average starting salary at the bachelor's degree level increased 21.1 percent from $17,096 to $20,712. During that time the average teacher salary in the state increased 16.1 percent from $29,437 to $34,170. The district-to-district salary disparities were dramatically reduced, with the gap between the highest and lowest starting salaries shrinking from 58.3 percent to 35.6 percent in one year from 1986-87 to 1987-88. In addition, the state share of public school expenditures increased from 39.9 percent in 1986-87 to 42.1 percent in 1987-88, the largest single-year increase ever experienced.

Staffing levels have also improved in the era of the Education Enhancement Act. As shown in the table above right, staff ratios have improved at all levels. For the lowest quartile of school districts, the EEA provided an additional 480 teaching positions statewide. These new positions have allowed districts not only to keep staff as enrollment has dropped, but also to improve the level of service in even the poorest districts.

The Future — The Education Cost Sharing Grant

Fulfilling a promise made when the Education Enhancement Act was passed, the 1988 session of the General Assembly completed a restructuring of Connecticut school finance by creating the Education Cost Sharing (ECS) Grant. Effective in 1989-90, the first of a four-year transition to the new grant, ECS will combine the pool of money previously made available through the Guaranteed Tax Base formula and the Education Enhancement Act, and add annually to this base, in a comprehensive equalization grant.

ECS focuses state resources on bringing all districts to a statewide minimum expenditure requirement, linking the equalization grant program and such state expenditure standards for the first time. This new per pupil spending level, to be called the regular program expenditure requirement, forms the basis of the new grant. Each town will receive a portion of this standard as a grant based on its municipal property/income wealth. This measure of wealth will be calculated on an adjusted per pupil basis for the first time, allowing the formula to push more aid to towns with higher concentrations of school-age children. The statewide mastery test results will be part of the determination of extra educational need, making Connecticut the first state in the nation to use educational determinants in distributing equalization aid. The ECS Grant will also create a more responsive and equitable distribution by using one-year-old data, instead of the three-year-old data used in the GTB grant.

Achieving the State Board of Education's goal of full fiscal equity requires that any school district should be able to support a standard level of expenditure with a similar local tax effort to that required of all but the wealthiest districts. Implementation of the Education Cost Sharing Grant represents an important milestone on the path toward achieving that goal.

Indicators of Success

In *Connecticut's Comprehensive Plan for Elementary, Secondary, Vocational, Career and Adult Education*, the State Board of Education established seven goals to be pursued by the Department of Education and Statewide Educational Goals for Students for the 1986 to 1990 period. Within each goal area the Board developed a set of indicators to measure progress in meeting the plan's goals.

The indicators are reliable and valid statistics which are measured over time, are easily understood and generally sensitive to policy direction. A statistic becomes an indicator if, in a policy context, it provides useful information about the health of our educational system.

The best and most recent data available to the Department of Education in the fall of 1985 form the "baseline" against which change can be measured. The difference between the baseline and the most recent statistics provides information about progress on each indicator, and thus about the Board's success in meeting its goals.

The indicators for State Board of Education Goals I-VI and for the Statewide Educational Goals for Students specify a desired direction of change. For example, an increase in state funds for adult education or a decrease in per pupil expenditure disparity among school districts. The indicators for Goal VII, "To Report on the Condition of Education," provide the context in which the success of the other indicators can be evaluated.

To represent change graphically, we have developed a set of symbols to show the trend or status of each indicator. These are displayed in the box to the right. Under Goal area VII, the same symbols are used to represent change in the statistic, not progress toward meeting a goal.

⬆	Change is in the desired direction.
⬇	Change is counter to the desired direction.
⟷	There is little change.
▬	Baseline data. No data indicating change are available.
⊘	No data are available.

The symbols represent change relative to the baseline data reported in the *Comprehensive Plan for Elementary, Secondary, Vocational, Career and Adult Education 1986-1990: The 1985-86 Action Plan*. Where this change is markedly different from a longer range pattern, the difference will be noted in the commentary.

The page number refers to the place in this document where the indicator is presented more fully. (N/A — not applicable — indicates that there is no additional discussion of the indicator elsewhere in the text.) There the indicator is discussed in the context of the state's people and schools, staff, student achievements, programs and finances.

GOAL I — TO ENSURE EQUITY FOR ALL CHILDREN

Progress	Indicators of Success	Commentary	Page
⬆	An increase in the state share of support for public education	The state share of the cost of public elementary and secondary education has increased from 37.8 percent in 1983-84 to 42.1 percent in 1987-88.	47-48

Progress	Indicators of Success	Commentary	Page
⬆	A decrease in the disparity among districts of elementary and secondary staffing ratios	Between 1984-85 and 1987-88 the disparity in staffing ratios (redefined as the number of teachers and support staff per 1000 students) between the 8th and 157th ranked district improved from 47.6 to 40.6 percent.	50
⬆	A decrease in per pupil expenditure disparity among school districts	Between 1984-85 and 1987-88 there was a significant reduction in the disparity among districts in per pupil expenditures. In 1987-88 there was a difference of 52.3 percent—the smallest difference ever recorded—between the 95th and 5th percentile districts ranked on expenditures per pupil. In 1984-85 this difference was 70 percent.	49-50
⬆	A decrease in the disparity among districts in starting and midcareer salaries	In 1985-86, there was a 77 percent disparity between the low starting salary of $11,497 and the high of $20,322. By 1987-88 the disparity had been cut to 35.6 percent, with a starting salary range of $17,745 to $24,062. The disparity in midcareer salaries in 1985-86 was almost 85 percent; master's degree maximum salaries ranged from $20,100 to $37,062. By 1987-88 the disparity was 54.2 percent, with salaries at the top step for those teachers with master's degrees ranging from $28,010 to $43,189.	50
⬆	A decrease in the disparity among the state's subgroups of students (race/ethnicity, sex, school district, parental income and similar subgroups) in participation in educational programs and educational outcomes	Several indicators are used to assess the disparity among the state's subgroups of students.	
		Baselines by race/ethnicity and gender were established in the 1987 administration of the Connecticut Mastery Tests in Grades 4, 6 and 8. A greater percentage of females than males met state remedial standards on all three subtests; across the three grades the difference averaged 6.6 points. Also across the grades, an average of 73.5 percent of white students met state remedial standards on all three tests, compared to 36.3 percent of black students and 29.7 percent of Hispanic students.	21-23
		In 1987-88 the difference between white and black students on the average combined SAT verbal and math was 202 points, the smallest ever recorded. In 1984-85 the difference was 219 points. In 1987-88 the white-Hispanic difference was 164 points, also the smallest ever recorded. In 1984-85 this difference was 184 points.	26
		The difference in the scores of male and female students on the mathematics portion of the SAT was the smallest ever recorded: 38 points in 1987-88, compared to 45 points in 1984-85. Males also continued to outscore females on the verbal SAT with a 12-point difference in 1987-88. This difference was 8 points in 1984-85.	25-26
		The difference in graduation rates for white students (82.5%) and black students (61.1%) did not change between 1984 and 1987, as the rate for both groups increased by 0.1 percentage point. With the graduation rate for Hispanic students rising from 45.9 percent to 48.2 percent in this period, the gap between Hispanic and white students decreased by 2.2 points.	29

Progress	Indicators of Success	Commentary	Page
	A decrease in the disparity among the state's subgroups of students (race/ethnicity, sex, school district, parental income and similar subgroups) in participation in educational outcomes (continued)	Since 1984 the proportions of white and minority high school graduates pursuing educational activities in general, and four-year colleges specifically, have increased, but the existing gaps between these groups of students have narrowed only slightly. In 1987, 71.9 percent of white students and 58.7 percent of minority students pursued educational activities after high school. (In 1984 the figures were 67.3 percent and 52.8 percent, respectively.) The 13.2 percentage point difference between the two groups was 1.3 percentage points narrower than the 1984 baseline difference. The gap between the percentage of white and minority students attending four-year colleges narrowed by 1.2 percentage points (from 19.8 to 18.6 percentage points) between 1984 and 1987. During this period the percentage of white students attending four-year colleges increased 6.5 points to 53.3 percent and the percentage of minority students attending four-year colleges increased 7.7 points to 34.7 percent.	30

GOAL II — TO IMPROVE THE EFFECTIVENESS OF TEACHERS AND TEACHING

Progress	Indicators of Success	Commentary	Page
⬆	An increase in teachers' starting and midcareer salaries to levels competitive with other occupations requiring similar training	In 1987 teachers' starting and midcareer salaries lagged behind those of positions in state service requiring comparable education and experience, but the difference was smaller than what existed in 1985. The median starting salary of teachers in 1987 ($20,712) was 9.6 percent below the average starting salaries paid to Social Worker Trainees, Clinical Nurses, Computer Programmer Interns, Engineer Interns and Accounting Trainees in state service. The difference in 1985 was 21.5 percent. Also, teachers' median salary at the top step of the 1987 master's degree schedule was $35,470, 4.1 percent below the top step salaries of state employees in the positions of Senior Accountant, Civil Engineer, Data Processing Systems Analyst I, Librarian, Personnel Officer II, and Social Worker. The difference was 10.9 percent in 1985.	12
⬆	An increase in the percent of prospective teachers passing the CONNCEPT examinations	In 1987-88 the population taking CONNCEPT changed dramatically as it became a requirement for certification as well as admission to the state's teacher preparation institutions. In 1987-88, 80.9 percent of prospective teachers and applicants for certification passed the test or received a waiver due to high SAT scores. In the two prior years, the passing percent of prospective teachers rose from 62.9 to 68.8.	13

Progress	Indicators of Success	Commentary	Page
	An increase in the SAT scores of those entering teacher preparation programs in Connecticut	The SAT scores of those entering teacher preparation programs are now merged with those seeking certification through the CONNCEPT program. In 1987-88, the estimated median combined SAT score of those seeking certification and admission to teacher preparation programs was 972. In the two prior years, when the program population was primarily those seeking admission to the state's teacher preparation programs, the estimated (revised) median SAT score rose from 880 to 888.	17
	An increase in state funds for professional development	State funds for professional development totaled $2.8 million in fiscal 1988, an increase of $2.3 million over the baseline 1984-85 expenditure.	13-14

GOAL III — TO IMPROVE SKILLS FOR FUTURE EMPLOYMENT

Progress	Indicators of Success	Commentary	Page
	A decrease in the unemployment rate of high school graduates relative to the state rate	The civilian unemployment rate of graduates of the local and regional public schools and the regional vocational-technical schools (RVTS) improved between 1984 and 1987 faster than both the statewide and youth 16-19 unemployment rates. The unemployment rate for graduates of the RVTS improved from 4.0 percent in 1984 to 2.4 percent in 1987. Concurrently, the rate for graduates of the local and regional high schools improved from 11.8 percent to 5.2 percent. During this period, the 16- to 19-year-old unemployment rate went from 13.3 percent to 11.1 percent and the total statewide unemployment rate went from 4.6 percent to 3.3 percent.	37-38
	An increase in the percentage of students completing vocational-technical programs	The percentage of students completing vocational-technical programs declined steadily between 1984 and 1987. Of the students admitted to the state vocational-technical school class of 1987, 63.3 percent were graduated from a vocational-technical school. The comparable figure for the class of 1984 was 71.8 percent. Many students return to their local or regional high schools to complete their education.	29
	An increase in the performance of students on CAEP/Vocational Education	Students in Business and Office Education programs were assessed in 1983-84 as part of the Connecticut Assessment of Educational Progress (CAEP). A majority of secretarial (84%), accounting (84%) and general office (61%) students scored at or above the standard of acceptable achievement for entry-level office workers on the business knowledge test. On performance tests of secretarial skills, 70 percent met the standard for format and typing of a letter, while 60 percent met the shorthand standard of 60 wpm. Thirty-nine percent of general office students met the standards for general office performance and 16 percent of accounting students met the standards for actual journal entries.	23

Progress	Indicators of Success	Commentary	Page
	An increase in the performance of students on CAEP/Vocational Education (continued)	Students in the comprehensive high schools and vocational-technical schools were tested in drafting, graphic arts and small engines in April 1987. Across five performance tasks in drafting, an average of 71.6 percent of students at comprehensive high schools and 74.2 percent of vocational-technical school students met standards of performance expected of an entry-level employee. On 12 performance jobs in graphic arts, an average of 93.7 percent of students at comprehensive high schools and 93.5 percent of vocational-technical school students met the performance standards. No small engine performance results were reported as too few students were tested.	23-24

GOAL IV — TO IMPROVE AND EXPAND ADULT EDUCATION PROGRAMS

Progress	Indicators of Success	Commentary	Page
	An increase in the percentage of students in adult basic education programs who, pass the GED test	In 1987, 78 percent of the students who were prepared in adult basic education programs passed the General Educational Development (GED) test. The 1985 baseline percentage passing was 76.2.	29-30
	An increase in the number of adults in adult basic education programs	In 1987-88 there were 46,417 adults enrolled in mandated adult education programs, an increase of 3,034 adults (7.0%) over the 1984-85 count of 43,383. The number has been as high as 47,053 (1985-86).	39
	An increase in the number of adults from underserved populations in adult basic education programs	Underserved populations include black and Hispanic residents, females, single parents, AFDC recipients, and 16- and 17-year-old out-of-school youth. Since 1984-85, the number of blacks enrolled has declined from 8,855 to 7,923 (-10.5%), while the number of Hispanics enrolled has increased from 12,302 to 13,174 (+7.1%). The number of females enrolled has increased by 3,490 (14.1%) to 28,175. The number of participants 16-24 years old has declined slightly (-2.4%) to 17,414. The numbers of single parents and people receiving Aid to Families with Dependent Children are unknown.	39
	An increase in the state funds for adult education	State funds for mandated adult education programs more than tripled between 1984-85 and 1987-88, rising from $2.01 million to $6.16 million.	N/A

GOAL V — TO IMPROVE AND EXPAND EARLY CHILDHOOD PROGRAMS

Progress	Indicators of Success	Commentary	Page
	An increase in the number of districts offering extended-day kindergarten	In the fall of 1987, 32 school districts offered all-day or extended-day kindergarten programs to at least some children, compared to 23 in the 1985 baseline year and 4 in 1980-81.	33

Progress	Indicators of Success	Commentary	Page
⊘	An increase in the percentage of children ages birth to three, and diagnosed as handicapped, who are provided a program or service	Because the number of children birth to three diagnosed as handicapped is unknown (school districts are not required to provide services to children before the school year in which they turn 3 by January 1), calculation of the percentage served cannot be made presently. A statewide interagency database for the birth-to-three population is scheduled to be operational in 1990-91.	N/A
⬆	An increase in the number of approved day-care facilities	The number of approved day-care facilities increased from 1,110 in 1985 to 1,272 in 1988. In that period the number of children enrolled increased by 34.1 percent to 62,980.	33
⊘	An increase in the number of public school programs for four-year-olds	No data are currently available on the number of public school programs for four-year-olds.	N/A
⬆	An increase in the state funding for early childhood education programs	The State Department of Education has three grants specific to early childhood education. The Young Parents Program was initially funded at $234,000 in 1986-87 and was funded at $244,000 in 1987-88. The Extended-Day Kindergarten grant was established in 1987-88 and funded at $980,000. The Birth-to-Three Special Education Programs and Services grant also was established in 1987-88, at a funding level of $350,000.	33

GOAL VI — TO IMPROVE THE QUALITY OF CURRICULUM AND INSTRUCTION

Progress	Indicators of Success	Commentary	Page
⬆	An increase in time allocated to instruction	The time allocated to instruction has increased at all grade levels since the 1984-85 school year. Districts scheduled an average of 964 hours of elementary-level instruction in 1987-88, versus 951 in 1984-85, an increase of 13 hours. This represents an additional 4.3 minutes daily. Hours increased from 949 to 965 at the intermediate level (an increase of 16 hours), from 947 to 961 at the middle/junior high school level (14 hours), and from 943 to 951 (8 hours) at the high school level.	N/A
▬	An increase in the number of credits taken by graduating seniors	The number of credits taken by graduating seniors in the class of 1984 averaged 4.1 in English, 3.1 in mathematics, 2.9 in social studies, 2.6 in science, 1.1 in the arts, 1.9 in vocational education, 1.4 in physical education, and 1.6 in foreign languages. The next data collection is scheduled for the class of 1988 and will be available in early 1990.	N/A
⬆	An increase in the number of gifted and talented programs at elementary, intermediate and high school levels	The number of gifted and talented programs increased at every level since in 1984. In 1987, 160 (of 166) school districts offered at least one such program, compared to 139 (of 165) in 1984. The number of programs increased by 13 at the elementary level, by 7 at the middle/junior high school level and by 6 at the high school level.	43

Progress	Indicators of Success	Commentary	Page
▬	An increase in the percentage of students taking courses eligible for college credits	In 1985-86, 3.1 percent of high school juniors and 10.9 percent of seniors were enrolled in college-level courses (Advanced Placement, University of Connecticut and others) offered for credit in comprehensive public high schools. Data for the 1987-88 school year will be available in early 1990.	N/A
⬆	A decrease in the percentage of students requiring remedial assistance	The percentages of students in Grades 4, 6 and 8 who fell below state remedial standards in any of the reading, writing or mathematics mastery tests have declined since the tests were first administered. In Grade 4 the percentage improved from 40.4 percent (1985) to 34.1 percent (1987). In Grade 6 the improvement was from 42.7 percent (1986) to 37.3 percent (1987), and in Grade 8 the percentage fell from 36.3 percent (1986) to 31.2 percent (1987).	18-19

GOAL VII — TO REPORT ON THE CONDITION OF EDUCATION

Status	Indicators of Change	Commentary	Page
⬆	Per pupil expenditures	The 1987-88 mean net current expenditure per pupil increased 16.7 percent over the previous year to $5,028. Over the past five years this expenditure increased at an average annual rate of approximately 13.0 percent.	49
⬆	Class size, staffing ratios	School staffing ratios have improved steadily over the past decade. In 1987, there were 73.6 teachers per 1,000 students, up from 68.8 in 1984. The number of support staff was 6.1 per 1,000 students, an increase of 0.5 over the 1984 level.	9-10
⬇	Percentage of poor (AFDC) students	The number of students receiving Aid to Families with Dependent Children (AFDC) was 10.0 percent of the 1987-88 average daily membership (ADM). In the 1983-84 base year, 11.5 percent of the ADM received this aid. In this timeframe the number of children receiving AFDC benefits has declined from 55,081 to 45,615. However, because AFDC benefits do not bring a family even to the national poverty level, and because of the high costs of housing and heating in Connecticut, these figures may underestimate the number of students living in poverty.	6
⬆	Average teacher salary	In 1987-88, the mean salary of teachers and support staff rose to $34,170, an increase of 36.9 percent over the 1984-85 baseline. Over the past five years the average salary has increased at an average annual rate of 10.2 percent. The 1987-88 average salary was ranked 4th nationally by the National Education Association.	11
⬆	Percentage of minority students	Minority students constituted 23.2 percent of the public school enrollment in 1987-88, compared to 21.1 percent in 1984-85 and 15.9 percent ten years ago.	6

Status	Indicators of Change	Commentary	Page
	Percentage of students attending nonpublic schools	The percentage of Connecticut students enrolled in the state's nonpublic schools declined from 14.0 percent in 1984-85 to 13.2 percent in 1987-88. The 1987-88 nonpublic enrollment of 71,143 does not include Connecticut residents attending private schools out of state.	6
	Number of limited-English-proficient students	In 1987-88, 12,049 limited-English-proficient students were served in mandated bilingual education programs. An additional 875 limited-English-proficient students were identified, but school districts were not required to provide bilingual programs for them, since there were fewer than 20 in any one school. Beginning with the 1988-89 school year, English language proficiency will be determined for all students for whom English is not the dominant home language.	42-43
	Percentage of female and minority administrators	The percentages of women and minorities holding administrative positions have increased consistently over the past several years. In 1987-88, women constituted 26.0 percent, and minorities 7.1 percent, of all administrators. In 1984-85 the percentages were 19.5 and 6.6, respectively.	13
	Percentage of female and minority students in vocational-technical schools	The percentages of female and minority students in vocational-technical schools have been increasing steadily. Minority students comprised 21.9 percent of all vocational-technical students in 1987-88, compared to 18.6 percent in 1984-85. Females were 27.2 percent of the students in 1987-88 versus 25.3 percent in 1984-85.	35-36
	Percentage of male and female students completing nontraditional vocational programs	The percentage of female students completing nontraditional vocational programs has been increasing, but the percentage of males completing traditionally female programs has backed off from recent levels. (A vocational program that is nontraditional for one sex was defined in 1981 as one in which at least 80 percent of the participants were of the opposite sex.) In 1987, females were 5.6 percent of the completers of traditionally male programs, compared to 4.8 percent in 1984 and 1.9 percent in 1980. Males were 20.4 percent of the completers of the traditionally female programs, compared to 21.4 percent in 1984 and 15.9 percent in 1980. In 1985 the percentage of males in traditionally female programs peaked at 23.6.	36-37
	Percentage of scholarship loan recipients (ELEET, Shortage) who enter teaching	Funding for the state's two scholarship loan programs is now limited to supporting those already in the programs. No new students are being accepted. Between 1984 and 1988 the Teacher Incentive Loan Program provided loans to 286 students planning to teach in shortage areas. As of September 1988, 101 had entered teaching. Since 1985, the ELEET program has provided 220 scholarship loans to students with high SAT scores who intended to teach. Most (56.8%) of the recipients are still in college. A total of 19 have entered teaching.	N/A

Status	Indicators of Change	Commentary	Page
↑	Average SAT scores of students intending to study education	The average combined SAT score of those intending to study education rose by 23 points to 851 between 1984-85 and 1987-88. It had been as low as 803 (1981-82). Prospective education majors are now 57 points below the state average SAT score, a distinct improvement over the 94-point deficit that existed in 1982-83.	17
↔	The supply and demand for teachers including the percentage of college-bound students intending to study education	In 1987-88 there was sufficient supply of teachers to meet the demand, although there continued to be shortages in a few subject areas. Between 1986 and 1987 turnover was a low 5.4 percent or 2,219 professionals. About 800 new positions were created, bringing the number of new staff in 1987 to 3,073. Turnover and the need to provide more teachers as enrollments increase will result in the need to hire approximately 3,000 professionals annually through the year 2000. In September 1987, 47.9 percent of the available positions were filled by teachers with prior teaching experience in Connecticut. In 1987-88, 2,840 people were awarded initial provisional certificates, the lowest number since data were first recorded in 1980. 1987-88 was the second year that testing was required for certification. The number of certificates awarded to current graduates from Connecticut's colleges and universities continued a downward trend. Current graduates from in-state institutions were 571 or 20.1 percent of those initially certified in 1987-88, compared to 1,128 (39.2%) five years ago. Only 26.6 percent of those first certified in 1986-87 obtained employment in a public school by September 1987. Indicators of future supply are mixed. The decline in the number of education degrees awarded by Connecticut colleges and universities appears to have bottomed out at a level 59 percent below the count of ten years ago. The number of master's degrees awarded in education has increased for the past three years; the 1987-88 count of 1,935 is 381 more than the 1984-85 low but 934 less than the 1977-78 count. The number of high school students indicating an intent to study education has increased significantly in the past three years. An estimated 2,070 seniors in 1988 indicated such an intent, compared to 1,180 in 1985.	14-17
↓	The number of handicapped students placed into competitive employment	In 1987-88, 1,683 clients rehabilitated in programs supported by the Division of Rehabilitation Services were placed into competitive employment, compared to 1,805 in 1985-86. The percentage of rehabilitated clients placed into competitive employment has increased from 82.6 to 88.3, however.	44-45
↔	The proportion of vocational education program completers who obtain a full-time job related to their training, pursue additional education, or enter the military	In 1987, 70.0 percent of all vocational education program completers either obtained a full-time job related to their training (24.2%); pursued additional education (43.3%); or entered the military (2.5%). This figure is up from the 1984 level of 68.9 percent, but below the 1985 percentage of 70.9.	37

Status	Indicators of Change	Commentary	Page
	The number of handicapped students graduating high school and placed into post-secondary training	No data are available on the number of handicapped students graduating high school who are placed in postsecondary training.	N/A
	The number of handicapped students in vocational education programs	There were 21,683 students with disabilities enrolled in vocational programs in the local and regional school districts in 1987, compared to 19,457 in 1985. Fewer than one in five (17.2%) were enrolled in occupational training programs.	N/A
	Percentage of public high school students enrolled in the vocational-technical schools	The percentage of public high school students enrolled in the vocational-technical schools has been 7.7 or 7.8 percent for the past five years. Ten years ago, 5.9 percent of public high school students were enrolled in the state's vocational-technical schools.	34-36
	The average score on the general educational development (GED) tests	The average scores on the five sections of the GED (writing skills, social studies, reading, mathematics and science) were lower in 1987 than 1984. Scores on the five components of the GED totaled 243.3 in 1987, compared to 247.3 in 1984.	N/A

STATEWIDE EDUCATIONAL GOALS FOR STUDENTS

The *1986-1990 Comprehensive Plan* included five statements concerning the knowledge, skills and attitudes essential to student learning. These Statewide Educational Goals for Students are:

Goal One:	Motivation to Learn;	Goal Four:	Competence in Life Skills; and
Goal Two:	Mastery of the Basic Skills;	Goal Five:	Understanding Society's Values.
Goal Three:	Acquisition of Knowledge;		

There is one set of Indicators of Success for the five goals for students.

Progress	Indicators of Success	Commentary	Page
	An increase in school attendance of students	The average daily attendance in 1987-88 (93.5%) retreated from the high of 93.8 percent set the previous year, but was slightly above the 1984-85 percentage of 93.4.	N/A
	An increase in the proportion of ninth graders who complete high school	The graduation rate of 77.9 percent in 1987 was up slightly from the 1986 rate of 77.2 percent but was essentially unchanged from the 1984 rate (77.8%). In recent years the graduation rate has been as low as 74.7 percent (1980) and as high as 78.9 percent (1977).	28-29

Progress	Indicators of Success	Commentary	Page
	An increase in student-reported time spent on homework	Eighth and eleventh grade students reported spending an average of 1.1 hours per day on all homework assignments in 1983-84. Data on time spent on homework will be available in 1990 on the Connecticut sample from the National Educational Longitudinal Study of 1988.	N/A
	An increase in performance on Connecticut Mastery Tests at Grade 4, 6 and 8 over initial year results	Student performance on the 1987 Connecticut Mastery Tests was up in all areas and all grades over the initial administration (Grade 4 in 1985 and Grades 6 and 8 in 1986). In Grade 4, the average number of objectives mastered in mathematics increased from 19.3 to 20.4 (out of 25); the average number of language arts objectives mastered increased from 6.1 to 6.2 (out of 9); the average holistic writing score improved from 4.8 to 5.1 (on a 2-8 scale); and the average reading score in Degrees of Reading Power (DRP) units increased from 43 to 45 (with 99 as a maximum). In Grade 6, the average number of objectives mastered in mathematics increased from 23.1 to 23.7 (out of 36); the average number of language arts objectives mastered increased from 7.5 to 8.0 (out of 11); the average holistic writing score improved from 4.7 to 4.9 (on a 2-8 scale); and the average reading score in DRP units increased from 55 to 56 (with 99 as a maximum). In Grade 8, the average number of objectives mastered in mathematics increased from 23.7 to 25.0 (out of 36); the average number of language arts objectives mastered increased from 7.5 to 7.7 (out of 11); the average holistic writing score improved from 5.0 to 5.2 (on a 2-8 scale); and the average reading score in DRP units increased from 61 to 62 (with 99 as a maximum).	18-19
	An increase in the percentage of students in adult education programs who pass the GED test	The pass rate on the GED test for those students enrolled in adult basic education programs has fluctuated in the past three years, moving from 76.2 percent in 1985 to 70.0 percent in 1986 and 78.0 percent in 1987.	29-30
	An increase in the achievement gains of students in Chapter 1, Educational Evaluation and Remedial Assistance (EERA), including bilingual, migrant and similar programs	In 1987, students in compensatory education programs exhibited meaningful educational growth in mathematics, with an overall mean gain of +5.4 Normal Curve Equivalents or NCEs. (A gain of +5 NCEs is considered evidence of meaningful educational growth.) In reading, NCE gains were positive (+4.0 NCEs) but did not reach the state goal of +5 NCEs. The magnitude of the gains in both reading and mathematics has been declining since the 1983-84 baseline.	40-41
		Students in migrant programs also demonstrated meaningful educational growth (+7.4 NCEs) in mathematics in 1987. Educational growth in reading was measured at +2.0 NCEs in the same biennial assessment. The achievement gain in mathematics was greater than that observed in both the 1983-84 and 1985-86 assessments. However, the reading achievement gain was less than that recorded in either of the two previous assessments.	41-42

Progress	Indicators of Success	Commentary	Page
—	An increase in the performance of students on statewide tests of knowledge of science, mathematics, social studies, the arts, literature, languages, and thinking skills	None of these statewide tests of knowledge are scheduled to be repeated in the Connecticut Assessment of Educational Progress (CAEP) program between 1985 and 1990; therefore, increased performance cannot be assessed. Baseline performances are described here. In the science assessment of 1985, performance was above the national average in the three grades tested. The 1980 mathematics assessment found Connecticut students above the national average in Grades 4, 8 and 11. The 1983 social studies assessment found Connecticut students failed to exceed the national average at all three grades. The 1981 arts assessment found both art and music performance above the national average at all three grades, with the exception of music at Grade 8. Literature was assessed in 1983-84, but no national comparisons were available. Foreign languages were assessed in 1987, but no national comparisons were available.	23-24
↓	An increase in the Connecticut SAT scores at a rate greater than or equal to the national rate	Connecticut's verbal and mathematical scores have declined since 1984-85. In that time the state's verbal average has declined 4 points to 436, while the national average has declined 3 points to 428. Connecticut's mathematical average has declined 3 points to 472, while the national average has increased by one point to 476.	25-26
↓	An increase in the Connecticut average on the Test of Standard Written English at a rate greater than or equal to the national rate	Between 1984-85 and 1987-88, the Connecticut average on the Test of Standard Written English (TSWE) increased by 0.1 point, while the national average increased by 0.3 points. The Connecticut average of 43.5 is now only 0.5 points above the national average.	26-27
↓	An increase in scores of students on Advanced Placement tests	The percentage of Connecticut public school students who score three or better (a standard for receiving college credit) on Advanced Placement exams declined from 75.4 percent in 1984-85 to 71.6 percent in 1987-88. Nationally, 66.0 percent of public school students achieved this standard. Between 1984-85 and 1987-88, the percent of Connecticut seniors participating in the AP program increased from 4.5 to 6.0.	27-28
↑	An increase in the percentage of students who are National Merit Commended Scholars	The 1989 National Merit Scholarship Program (based on Preliminary Scholastic Aptitude Tests taken in 1987) commended 1,010 students or 2.4 percent of Connecticut's public and nonpublic school 11th graders, an increase from the 2.1 percent commended in 1986.	25
↑	An increase in the proportion of secondary school graduates in civilian or military employment, postsecondary education or training	In 1987, 97.6 percent of the public school graduates and 96.5 percent of the vocational-technical school graduates were in civilian or military employment or postsecondary education or training programs. Both are increases over baseline levels of 95.5 and 95.6 percent, respectively, set in 1984.	29-30

Progress	Indicators of Success	Commentary	Page
—	An increase in the percentage of students demonstrating understanding of the principles of democratic societies and the American legal system on the Connecticut Assessment of Educational Progress	Knowledge of the principles of a democratic society were last tested on the social studies CAEP of 1982-83. Eighth grade students scored an average of 54 percent correct and 11th graders an average of 69 percent correct. Among 11th graders, 83 percent indicated they had voted in a school or class election, 27 percent had been a candidate in a school election, 9 percent had worked on a political campaign and 46 percent had volunteered for a community project. Students' understanding of the principles of a democratic society and the American legal system were part of the National Longitudinal Study of Connecticut's 8th graders in 1988. Results are expected in 1990.	N/A

7 Meeting The Challenge

This report on the condition of education in Connecticut should do more than summarize information concerning students, teachers and programs in our state. It should do more than offer a perspective on where we have been and where we are in our efforts to provide each learner with a suitable program of educational experiences. It should serve as a guide to where we must go from here; it should provide a foundation for the process of making decisions about the financial and human resources required to sustain our educational strengths while making needed improvements.

The issue of financial resources is clearly a critical one. Connecticut, like all states, faces the challenge of meeting fundamental commitments with finite resources. Expectations in two of these broad areas — strengthening the teaching profession and ensuring excellence and equity in educational programs — are described below.

Strengthening the Teaching Profession

The recent history of Connecticut's efforts to strengthen the teaching profession began nearly a decade ago. The key date in that history was June 1986, when the Education Enhancement Act was passed by the General Assembly. Since that time there has been some fine tuning of this bold package of educational reform, and a great deal of effort to develop the programs and regulations mandated by the new law. Essentially, then, the plan is in place. The challenge now is to implement that plan effectively.

The salary provisions of the Education Enhancement Act have already resulted in significant improvement in Connecticut teacher salaries, which now are second highest in the nation.

The goal of offering the best salaries is to attract, and retain, the best teachers. But good salaries alone cannot guarantee good teachers. The full range of programs designed to enhance standards for new teachers and to ensure ongoing professional development for experienced teachers must have the desired effect of making the best possible instruction available in all Connecticut classrooms. This, in turn, must lead to the ultimate goal of improving the personal and academic achievements of all Connecticut students.

Each step on the *Connecticut Continuum: Connecticut's Commitment to the Teaching Profession* places clear responsibilities on the Department of Education. For the coming years, these commitments include the following:

- Implement the requirements of the new three-tier certification system of initial, provisional and professional certification.
- Work cooperatively with the Board of Governors of Higher Education and Connecticut colleges and universities to implement the revised, strengthened criteria for approving teacher preparation programs.
- Continue to administer the Connecticut Competency Examination for Prospective Teachers (CONNCEPT), monitoring the numbers and percentages of those who pass the test or receive waivers based on SAT or ACT scores.

- Complete the process of validating and phasing in the CONNTENT examinations (which will ensure that prospective teachers have the content knowledge essential to their subject specialties) in 23 subject areas.
- Continue the Cooperating Teacher Program, which trains experienced teachers to assist student teachers in their first classroom experiences, and the Beginning Educator Support and Training (BEST) Program, which provides trained mentors to act as role models and peer coaches for beginning teachers while assigning trained assessors to determine whether these new teachers have achieved an appropriate level of professional competency.
- Implement the requirement that experienced teachers (those who hold professional educator certificates) complete nine continuing education units (CEUs) every five years, and provide support to teachers as they pursue their individual programs of professional development. This will include continuing to sponsor the Institute for Teaching and Learning, which presents institutes, workshops and conferences to thousands of Connecticut educators each year, and providing Professional Development Grants to assist local districts in implementing their mandated five-year professional development plans.
- Continue to recognize the achievements of Connecticut teachers through the Celebration of Excellence, Teacher of the Year and Connecticut Educator Award programs, and seek additional ways to honor the state's most accomplished educators.

Clearly, many of these activities — for example, the BEST Program — must be undertaken in strong and constructive partnership with local school districts. Others, such as approving teacher preparation programs and conducting the Cooperating Teacher Program, require an excellent working relationship with higher education. Still others, such as teacher recognition programs, involve joint efforts with the private sector. Sustaining these partnerships, and building upon them, will be critical in our efforts to strengthen the teaching profession.

Equity and Excellence

The equitable distribution of resources among school districts is a fundamental element in the achievement of educational equity and excellence for all Connecticut students. In pursuit of this goal, a four-year transition to a new, comprehensive equalization grant — the Education Cost Sharing (ECS) Grant — begins in 1989-90. Each town will receive a portion of a new standard for per pupil spending as a grant based on its municipal property/income wealth. The formula directs more aid to towns with higher concentrations of school-age children, and includes the statewide mastery test results in a determination of extra educational need.

As is true of Connecticut's efforts to strengthen the teaching profession, the plan to more equitably distribute resources to school districts is in place. As the transition to the Education Cost Sharing Grant begins, it is clear that the Department of Education must not only effectively administer the grant, but also closely monitor its impact on local districts. These are some of the questions that must be asked: How successful will the grant be in balancing local tax efforts and in directing funds to districts most in need? How effective will those funds be in assisting districts to provide educational programs of comparably high quality? As disparities in expenditures decrease, will disparities in student achievements decrease proportionately?

It is important to understand, however, that disparities in student achievements must be addressed through a variety of state and local programs and approaches that respond to specific needs. These include programs in special, bilingual, compensatory and migrant education; instructional strategies developed in the classroom in response to needs identified through mastery testing; early childhood initiatives, including those serving infants and toddlers; child nutrition programs; dropout prevention efforts; and programs aimed at improving the health and well-being of students, including AIDS prevention education, suicide prevention education and substance abuse prevention education. These ongoing efforts must be maintained, monitored, revised and expanded where necessary if we are to provide all Connecticut students with an equal opportunity to learn and to achieve.

Efforts to advance quality, integrated education in Connecticut schools also are essential to achieving educational equity and excellence for all Connecticut students. A multicultural learning environment is a fundamental element of a quality education. In coming years, the State Board and State Department of Education will play key roles in further articulating the problem of racial and ethnic isolation in Connecticut and in building a consensus on how to solve that problem. The emphasis will continue to be on voluntary, interdistrict approaches to developing programs that offer quality, integrated education to Connecticut students. The Governor's Commission on Quality and Integrated Education, which will make its recommendations by the end of 1990, will provide statewide leadership and direction on this issue.

As part of the effort to provide quality and integrated education — and as part of the effort to strengthen the teaching profession — strategies must be developed to attract minority men and women into the teaching profession in Connecticut. One method, a program to provide a career ladder that will enable paraprofessionals to earn teaching certificates, will involve a strong cooperative effort among the Department of Education, the Department of Higher Education, school districts and the private sector.

Outcomes for Connecticut Students

All activities of the Department of Education are designed to improve the educational achievements and personal outcomes of Connecticut students. Each activity undertaken by the Department must be continually evaluated in terms of its success in

meeting this goal. When significant resources are directed toward such objectives as strengthening the teaching profession, restructuring school finance and advancing quality and integrated education, the public has a right to expect improvement in student achievements. Thus, the Department has a shared responsibility with school districts to regularly monitor and report on student outcomes.

Our ongoing efforts to assess the condition of education in Connecticut must seek answers to questions such as these: Are Connecticut students mastering essential skills in reading, writing, language arts and mathematics? Are they meeting the expectations of the Common Core of Learning? Graduating from high school? Successfully entering careers or continuing their education? Are all subgroups of Connecticut students achieving at comparably high levels?

The answers will enable us to answer the fundamental question: Are the state's education programs making a difference in the lives of our students?

Looking Ahead

The challenge of the coming years is clear: Fundamental commitments to achieving quality education for all Connecticut students must be met with finite financial resources. To meet this challenge, we must work together.

The Governor, the General Assembly and the State Board of Education have forged a strong partnership to design, fund and implement bold approaches to improving education in our state. That partnership is not an exclusive one, however; it includes local educators and policy makers, higher education, the private sector, and every citizen in Connecticut.

The key, then, is that while financial resources may have a limit, the human spirit does not. If we invest both our resources and our spirit as wisely and as generously as we can, the possibilities for our future can be unlimited.

It is the policy of the Connecticut State Board of Education that no person shall be excluded from participation in, denied the benefits of, or otherwise discriminated against under any program, including employment, because of race, color, sex, national origin, religion, age, mental or physical disability, mental retardation, or marital status.

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